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ILLUSTRATIONS
OF THE
ZOOLOGY OF SOUTH AFRICA;

CONSISTING CHIEFLY OF
FIGURES AND DESCRIPTIONS OF THE OBJECTS OF NATURAL HISTORY

COLLECTED DURING
AN EXPEDITION INTO THE INTERIOR OF SOUTH AFRICA,
IN THE YEARS 1834, 1835, AND 1836;

FITTED OUT BY
"THE CAPE OF GOOD HOPE ASSOCIATION FOR EXPLORING CENTRAL AFRICA:"

TOGETHER WITH
A SUMMARY OF AFRICAN ZOOLOGY,
AND AN INQUIRY INTO THE GEOGRAPHICAL RANGES OF SPECIES
IN THAT QUARTER OF THE GLOBE.

BY ANDREW SMITH, M.D.,
SURGEON TO THE FORCES, AND DIRECTOR OF THE EXPEDITION.



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PROCELLARIA GLACIALOIDES.
(Aves-Plate 51.)

PROCELLARIA GLACIALOIDES.—SMITH.

AVES.—PLATE LI. (MALE.)

P. supra cineracea, subtus alba; capite cerviceque albis, flavo-cinereo-tinctis; remigium primarium tectricibus, remigibus primariis secundariisque externè brunneo-rubris, internè ultimis duabus albis: caudâ pallidè cinerescente; corporis lateribus anticè et posticè griseo-cæruleo-tinctis. Rostro suprâ purpureo-cæruleo, infra subcarneo; mandibularum apicibus livido-nigris. Pedibus livido-griseis. Oculis rubro-brunneis.

LONGITUDO a rostri apice ad basin caudæ 13 unc. 6 lin.; caudæ 5 unc. 3 lin.

COLOUR, &c.—The head and the back and sides of the neck white, with a distinct tinge of yellowish grey, very faint towards the base of the bill; the interscapulars, rump, upper tail coverts, lesser wing coverts, secondary quill coverts, and scapulars, ash-grey, tinged with yellowish grey: under parts pure white; the flanks anteriorly and posteriorly clouded with pearl-grey. The outer vanes of the primary quill coverts and quill feathers, together with the inner vanes of the latter near their tips, brownish red; the outer vanes of the secondary quill feathers white towards the base, brownish red towards the point, the inner vanes of these and of the primary quill feathers, except the portion already particularized, pure white; the inner vanes of the primary quill coverts pearl-grey. Tail feathers pale ash-grey, changing into white on the inner vanes. All the feathers exhibit a faint satin-lustre. Upper mandible from base to hook dull lavender-purple, slightly tinged with lake red, base of hook greenish white, tips of both mandibles livid black, the remainder of the lower mandible a pale flesh colour. Legs and toes livid grey; webs lighter, with a flesh coloured tint. Eyes deep reddish brown.

FORM, &c.—Figure moderately robust, and more rounded than that of the smaller species of the genus. Head considerably elevated above the bill, and superiorly rounded; bill strong, somewhat subcylindrical towards the base, compressed near and at the point. The nasal tube depressed, and the septum, which divides it interiorly into two canals, does not quite reach to its anterior extremity, hence the actual opening is entire; the hook of the man-

PROCELLARIA GLACIALOIDES.

dible is strongly arched and pointed, and its superior edge near its commencement projects slightly above the culmen; the latter is flat and separated from the lateral portion of the mandible on each side by a distinct longitudinal groove; the cutting edge of the lower mandible arched at the point, but the point itself is not prolonged downwards below the lower edge of the bill, in which respect it differs from several of the smaller species, though not materially from some of them. Tarsi robust, and coated with small flat scales, which are partly angular and partly rounded; the latter are the smallest, and chiefly disposed posteriorly. Anterior toes strong, each terminated by a long, slender, and slightly curved claw; a short, strong, and somewhat cylindrical claw in the place of the hinder toe; the anterior margin of web between outer and middle toe nearly truncate, between the middle and inner oblique. Wing long, and when folded extends about half an inch beyond the point of the tail; the outer wing feather the longest, and exceeds in length the second by nearly half an inch. Tail rounded, the outermost feather of each side fully an inch shorter than the middle ones.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to			Length of the tarsus	1	11
the point of the tail	18	9	of the outer toe.....	2	1
of the bill from the gape	2	0	of the middle toe	1	11½
of the wings when folded.....	12	4	of the inner toe.....	1	7¼
of the tail	5	3	of the hinder toe	0	1¼

The colours of the plumage in the *femule* are similar to those of the male.

In many respects this species has a strong resemblance to *Procellaria glacialis* of authors, but the greater length of its bill supplies an efficient diagnostic character by which it is to be distinguished. Had the bill merely been longer, I should have hesitated before I considered it distinct, as the degree of development of an organ is not to be made available as a specific character. The length of the bill, however, is not only greater, but the thickness is also different, being inferior to that of *P. glacialis*, and neither are ever otherwise in any individual of the Cape species.

While the smaller Petrels almost constantly resort to the open sea, this species often hunts for its food in the neighbourhood of the South African coasts, and even frequently enters the bays, apparently for the same purpose. It flies higher above the surface of the water than the smaller species, rests more frequently, and seems well disposed to feed upon dead animal matter when such can be obtained.



PROCELLARIA MACROPTERA.—SMITH.

AVES.—PLATE LII.

P. obscure rubro-brunnea; rostro nigro; pedibus brunneis.

LONGITUDO ab apice rostri ad basin caudæ 11 unc. 6 lin.; caudæ 6 unc.

COLOUR.—The whole plumage intermediate between brownish red and liver-brown; several of the scapulars and interscapulars narrowly tipped with yellowish brown. The feathers of the head, neck, and body silvery white towards their base, with a satin lustre. Bill rich black. Tarsi, toes, and interdigital membranes liver-brown, the two first tinted with lake-red.

FORM, &c.—Figure moderately stout, and not quite so rounded as that of the last species. Head of moderate size, and slightly tapering towards the vertex; bill robust, and strongly compressed, particularly towards the point, the sides of the upper mandible slightly convex, and distinctly separated on each side from the culmen, by a deep longitudinal groove, which commences at the anterior extremity of the nasal tube, and terminates at the commissure about opposite to the point where the edge of the lower mandible begins to curve downwards. The hook of the upper mandible forms fully half the length of the bill, its base being within a small distance of the termination of the nasal tube; it is much curved, and its point descends considerably below the lower mandible; posteriorly its upper edge projects above the level of the nasal tube; the latter is rounded superiorly, or somewhat bluntly carinated, and anteriorly presents only a single opening. The lower mandible is marked on each side with a distinct longitudinal groove, which commences at its base, and terminates where the cutting edge begins to curve downwards; the point of the mandible is acute, and slightly prolonged. Tarsi moderately robust, and covered with small, flat, irregular shaped scales; toes rather slender; interdigital membranes large, and their anterior edges superiorly delicately plaited. Claws slightly curved and pointed; a slender somewhat cylindrical claw in the place of the hinder toe. Wings long, and exceed by an inch and

PROCELLARIA MACROPTERA.

a half the length of the tail ; the first quill feathers the longest. Tail rounded, the two centre feathers about an inch longer than the outermost one of each side.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	1	6
the tip of the tail.....	17	0	of the outer toe	1	11
of the bill from the gape	1	9	of the middle toe	1	11
of the wings when folded.....	13	9	of the inner toe.....	1	7
of the tail	6	0	of the hinder toe	0	3

Nothing is known of the colours of the other sex.

This is a rare bird on the Cape Seas ; therefore it is probable the favourite *habitat* of the species is farther to the southward. While on the wing it keeps near to the surface of the water like *Procellaria Turtur*, &c.

When I first examined the specimen which has afforded the foregoing description, I was disposed to regard it as an example of *Procellaria grisea*, Gmel., but on further examination, such doubts arose as led me to resolve on considering it distinct. The published descriptions of most of the species of the group are so vague and deficient in diagnostic characters, that it will be found necessary, for the good of science, that almost all of them be unceremoniously rejected, unless the originals which supplied the descriptions should be re-described. Colours are not calculated to furnish good diagnostic characters in this group ; these must be drawn from the form of the bill, &c., and from the measurements of the different parts of the bird. The following appear to be well authenticated species, and the published descriptions are sufficiently precise to enable the naturalist to refer any bird which he possesses belonging to them to its proper species.

<i>Procellaria gigantea</i> , Lin.	Cape, and Southern Seas.
<i>æquinoctialis</i> , Lin.	Do.
<i>Capensis</i> , Lin.	Do.
<i>puffinus et cinerea</i> , Lin.	Do.
<i>glacialis</i> , Lin.	Northern Seas.
<i>glacialoides</i> , Smith	Cape, and Southern Seas.
<i>macroptera</i> , Smith	Do.
<i>Anglorum</i> , Temm.	British Seas.
<i>Turtur</i> , Forst.	Cape, and Southern Seas.
<i>Forsteri</i> , Smith	Do.
<i>obscura</i> , Gmel.	Northern Seas.
<i>hasitata</i> , Temm. Pl. col. 416.	Indian Seas.
<i>Bulweri</i> , Jardine and Selby	Indian Seas.





BOOBY, LARVA OF THE BOOBY
(Aves. Plate 53)

PROCELLARIA FORSTERI.—SMITH.

AVES.—PLATE LIII.—MALE.

P. suprà cinerea flavo-grisco-tincta; capite supernè, nuchâ, alarum tectricibus minoribus, remigium tectricibus primariis sordidè subbrunneis; remigibus quatuor externis externè brunneis internè albis; fronte, capitis lateribus, superciliis partibusque inferioribus albis, tribus prioribus plus minusve brunneo punctatis; torque dimidiatâ ante alas cinerescente; remigium scapis brunneo-rubris. Caudâ cinerescente, plumâ externâ singulorum subalbâ, reliquis albo-terminatis. Rostro brunneo, versus apicem fusco, mandibulâ inferiore flavo-brunnea-notatâ; pedibus flavo-brunneis. Oculis nigro-brunneis.

LONGITUDO ab apice rostri ad basin caudæ 6 unc. 7 lin.; caudæ 3 unc. 10 lin.

COLOUR, &c.—The upper part of the head, and the nape of the neck intermediate between broccoli-brown and pearl-grey, the remainder of the neck superiorly, the interscapulars, the back, the rump, the upper tail coverts, a half collar on the breast in front of the wings, and the secondary quill coverts pearl-grey, slightly tinted with yellowish grey; the rump and upper tail coverts lightest. The lesser wing coverts, the outer vanes of the primary wing coverts, and of the four or five first quill feathers, the same colour as the head, only distinctly tinged with grey; the inner vanes of the latter towards the shafts the same colour, only lighter,—the colour quickly fades into pure white; the other quill feathers yellow ashy grey, fading towards the edges of the inner vanes and tips into white; the shafts brownish red. Scapulars grey, darkened by a distinct tint of broccoli-brown, several of them finely tipped with white. Tail pearl-grey, with a faint shade of yellowish-grey, the tips of all the feathers, as well as their inner edges, white; and immediately behind the white tips there is a distinct tint of broccoli-brown; in some, perhaps in most, individuals, the lateral feather of each side is dull white, with a freckling of grey towards its shaft. Forehead, space in front of eyes, eyebrows, sides of head, and under parts white; the three first named more or less speckled with broccoli-brown. The upper mandible towards the base deep reddish brown, the nasal tube and the rest of the mandible liver-brown; the tip of the lower mandible liver-brown, its sides towards the commissure reddish brown, inferiorly yellowish brown. Legs and toes yellowish brown, the scales reddish brown; webs light wood-brown, with a lilac tint. Eyes blackish brown.

FORM, &c.—Figure full; head elevated and of moderate size; neck thick; bill rather slender, with the sides nearly vertical, the division between the latter

PROCELLARIA FORSTERI.

and the culmen distinct, and formed on each side by a longitudinal groove. The culmen flattened and below the level of both the hook of the mandible and the nasal tube, the hook strongly curved and sharp pointed; the nasal tube contracted posteriorly, bulged anteriorly, and terminated by two nostrils which are separated from each other by a distinct septum; the lower mandible acute at the point, and strongly curved downwards. Tarsi moderately strong, and covered with small, flat, irregular shaped scales; anterior toes slender, webs large, claws delicate and slightly curved; a short obtuse claw in the place of the hinder toe. Wings long, and when folded extend fully an inch beyond the tip of the tail; the first and second feathers longest, and nearly of equal length; the third, fourth, fifth, and sixth successively shorter. Tail slightly rounded, the two centre feathers about half an inch longer than the outermost one of each side.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to the			Length of the tarsus	1	3
tip of the tail	10	5	of the outer toe	1	3
of the bill from the gape	1	3	of the middle toe	1	3½
of the wings when folded	8	6	of the inner toe	1	1
of the tail	3	10	of the hinder toe.....	0	1

The colours of the *female* are similar to those of the male.

As far as I have been able to discover, there is nothing in the habits of this bird by which it is to be recognized from various other small species which occur in common with it upon the Cape seas. It is to be seen more or less remote from both the southern and western coasts of South Africa, and it even visits occasionally some of its bays, but never continues in the latter beyond a very limited time. The open sea seems its favourite resort, and there it is to be seen skimming along close to the surface of the water, as well in the storm as in the serenest weather, and picking up its food apparently with as much ease and in as great abundance during the raging of the gale as in the stillness of the calm. It often keeps company with ships for a great distance, and though it never approaches them so closely as the stormy petrels (*Thalassidroma*), yet the course it takes and the changes it makes according to the direction the ship pursues, show that its object is to keep company with the latter, though it cannot, from the shyness of its nature, benefit in any way by the presence of its fellow-traveller, more especially as it generally keeps either slightly in advance of the vessel, or off one of her sides. When it discovers an object suited for its food, of a size such as is to be seized and swallowed while on the wing, it is seen merely to plunge into the water, and then proceed; but when the size renders that inconvenient, it rests and floats for the necessary time, and then by the rapidity of its flight makes up the lost ground, and takes up one of the positions above mentioned. Hours and hours it passes after this manner, and appears as free from exhaustion when it parts company, as when it joins a vessel.



PROCELLARIA TURTUR.
(Aves. Plate 54)

PROCELLARIA TURTUR.—FORST.

AVES.—PLATE LIV.—FEMALE.

P. cinereo-cærulescens, subtus alba; regione ante oculos, superciliis, palpebrisque inferioribus albis; alarum tectricibus minoribus, scapularium apicibus, remigium tectricibus primariis, remigium quatuor pogoniis externis, caudæque apice sordido-brunneo-rubris; caudâ versus basin cinereâ. Rostro nigro-viride, mandibulâ superiore ad apicem flavo-brunneâ, inferiore livido-albâ. Pedibus brunneo-rubris. Oculis nigro-brunneis.

LONGITUDO ab apice rostri ad basin caudæ 6 unc. 9 lin.; caudæ 4 unc.

COLOUR.—The upper surface of the head dull pearl-grey, the feathers towards their points tinged with light brownish red, which is also the colour of their shafts. The back and sides of neck, the interscapulars, back, rump, upper tail coverts, scapulars, and the half collar on breast in front of wings between clear blueish and pearl-grey. Spaces in front of eyes, eyebrows, a stripe behind each eye, and the under parts of the neck and body clear white; the flanks and under tail-coverts pale lilac-purple. The lesser wing coverts, the scapulars towards their points, the primary quill feathers, the outer vanes of the four external quill feather, with their tips, and about the last third of the eight middle feathers brownish red, deadened with grey; the colour of the lesser wing coverts and scapulars of the two sides forms a dark bar somewhat in the shape of the letter V upon the back when the wings are folded. The secondary quill coverts, the primary quill feathers, save those already described, the whole of the outermost feather on each side of the tail, nearly all the second, and the first two-thirds of the rest dark ash-grey; the inner vanes of the four external quill feathers dull pearl grey, fading toward the inner edges into white, which is also the colour of the edges of the inner vanes of the other quill feathers. Behind each eye a narrow longitudinal stripe of lilac-purple, and the feathers immediately under the lower eyelid, which is white, and those in front of the eye are of the same colour, only a shade lighter. The upper mandible towards the base livid blackish green, the hooked portion, and the edge of the mandible dull yellowish brown; the tip of the lower mandible dull livid white, elsewhere coloured as the upper

PROCELLARIA TURTUR.

towards its base. Legs and toes, in preserved specimens, light brownish red, the webs between the toes a pale flesh-colour, with small brownish red variegations towards the toes; claws dark brownish red, each marked superiorly towards its base with a narrow longitudinal yellowish brown stripe. Eyes blackish brown.

FORM, &c.—Figure moderately robust, head and neck rather small; bill stout, particularly towards the base, the hook of the upper mandible rather robust and moderately arched, the curvature less than in *P. Forsteri*; the cutting edge of the under mandible slightly arched towards the tip, and the latter, which is acute, is slightly inclined downwards; nasal tube short, depressed and terminated by two nostrils, separated by a visible septum. Tarsi rather slender, and clothed with small, flat, irregularly shaped scales; anterior toes moderate, and the place of the hinder one occupied by a short pointed claw. Webs broad, the anterior margin of that between the outer and middle toe slightly oblique; in the one between the middle and inner toes, the obliquity is greater; claws short, slender, slightly curved and pointed. The wings when folded reach to the tip of the tail, the first and second quill feathers nearly of equal length and longest. Tail much rounded, the two middle feathers being about an inch longer than the outer one of each side.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus.....	1	1½
point of the tail	10	9	of the outer toe.....	1	4
of the bill from the gape	1	2	of the middle toe	1	4
of the wings when folded.....	7	6	of the inner toe.....	1	1
of the tail	4	0	of the hinder toe	0	1

The colours of the *male* are the same, only rather brighter.

This species is less bulky than *P. Forsteri*, and is readily distinguished from it, not only by marked differences of the bill, but also by its tail being more rounded, and very differently marked at the point. The bill of *P. Forsteri* is longer and narrower than that of the species just described, and the hook of its upper mandible is much more compressed and more curved: the relative length of the wings is also different in the two species in question, in *P. Forsteri*, when folded, they exceed the point of the tail by at least an inch; in *P. Turtur*, again, they only reach the extremity of the centre tail feather.

The observations we have made in regard to *P. Forsteri* will equally apply to this species, which is an inhabitant of the same seas, where it observes the same practices, and apparently feeds upon the same kind of food.



PACHYPTILA BANKSII.
(Aves Plate 55)

PACHYPTILA BANKSI.—SMITH.

AVES.—PLATE LV. (FEMALE.)

P. supra grisea; capite supernè, cervice, interscapularibusque brunneo-tinctis; alarum tectricibus minoribus apicibusque scapularium brunneo-rubris; caudâ griseâ, flavo-griseo-tinctâ, plumarum apicibus sordidè brunneis. Fasciâ purpureâ brunneo-rubro-tinctâ trans oculum, pectorisque lateribus nitidè griseis; infra alba. Oculis brunneis. Rostro lividè brunneo, versus apicem supernè viride-albo-nebulato. Pedibus brunneo-rubris.

LONGITUDO ab apice rostri ad basin caudæ 6 unc. 3 lin.; caudæ 3 unc. 9 lin.

COLOUR.—The upper surface of the head and the back of the neck dark pearl-grey obscured with brown, the latter darkest on the head; the sides of the neck, behind the ears, and a half collar on the breast, in front of the wings, intermediate between blueish and pearl-grey. Eyebrows, and the space between the eyes, and the base of the bill white, the latter sparingly mottled with dusky points; the sides of the head, before and below the eyes, together with a band, in continuation of the latter, which extends to nearly half an inch beyond the ear coverts, dark lavender-purple, tinged with brownish red. The interscapulars, scapulars, and back, dirty pearl-grey, the first distinctly tinted with brown, the last strongly glossed with lavender-purple. The lesser wing coverts, and the tips of the scapulars dull brownish red, mellowed with grey, and each feather distinctly margined with the same colour. The primary quill coverts light brownish red; the outer vanes of the secondaries, and their inner vanes at the tips, pearl-grey, tinted with brown, the remainder of the inner vanes grey-white, with a satin gloss. The outer vanes and points of the first four primary quill feathers dull chocolate-brown, margined with pearl-grey, the inner vanes close to the shafts, a pale tint of the same colour, more internally yellowish white, the rest of the quill feathers dull pearl-grey, each internally margined with white, the outer vanes and more especially the points of the feathers tinted with brown. Tail feathers pearl-grey, more or less tinged with yellowish grey, the edges of the inner vanes lightest; the points of the feathers chocolate-brown, which colour is only appreciable, or at least distinct, on the two external ones of each side immediately after the bird has moulted. Chin, sides of neck inferiorly, throat, breast, belly, vent, and under tail coverts clear white. Bill livid brown, towards tip clouded with dirty greenish white. Legs and toes light brownish red; webs yellowish brown. Eyes deep brown.

FORM, &c.—Figure rather full, head of moderate size. Bill broad at the base, narrow and slender near and at the point; the upper mandible is strongly hooked, the margin of the lower anteriorly, distinctly arched, and the point of the mandible, which is acute, is curved downwards. Nasal tube depressed and anteriorly terminated by two nostrils; culmen obtuse and depressed below the level both of the nasal tube and the base of the hook

PACHYPTILA BANKSI.

which terminates the mandible ; the lateral portions of the bill are separated from the culmen by a deep longitudinal groove on each side, expand considerably, particularly towards the angles of the mouth, and internally the cutting edge of each is armed with a row of very fine, closely set membranous laminae, disposed in a transverse direction. Tarsi rather slender, and coated with irregular flat scales ; feet rather large, the anterior margin of the web belonging to the outer and middle toes semicircular, that of the middle and inner ones very oblique, a form necessary on account of the inferior length of the latter toe ; anterior claws slender and moderately curved, the posterior one straight, short, and pointed, and supplies the place of the hinder toe. Wings long, and when folded reach nearly to the apex of the tail ; the first quill feather longest, the second slightly shorter, several of the others diminish in length successively, but in a greater ratio. Tail rounded, the two centre feathers being nearly an inch longer than the outermost one of each side.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	1	4½
the tip of the tail.....	10	0	of the outer toe.....	1	3
of the bill from the angle of			of the middle toe	1	3
the mouth.....	1	4½	of the inner toe.....	1	1
of the wings when folded	7	9	of the hinder toe	0	1½
of the tail	3	9			

Judging from an imperfect specimen of a male bird of this species, which I once saw I am inclined to believe the colours are the same in both sexes.

This species is easily to be distinguished from *Pachyptila vittata* Illiger, *Procellaria vittata* and *cærulea*, Forst., *P. Forsteri*, Lath., by a variety of characters, but most readily by its bill : the latter in our species is much narrower, and the sides less oblique ; the width at the base is only seven lines, the width of *P. Forsteri* nine and a half ; the sides of the bill in the latter proceed more horizontally, and the bill itself is altogether much larger, and differently shaped ; the circumstance of many of the scapulars of *P. vittata* being broadly tipped with white, also furnishes a good diagnostic character.

This bird appears to prefer the open sea to the vicinity of coasts, and though it occasionally appears in the bays of the Cape peninsula during very stormy weather, yet it rarely continues in or near them after the tempest which may have induced it to seek for the time a comparatively placid retreat has subsided. It is constantly to be seen from vessels sailing along the eastern coast, particularly during the winter season ; and it has often been a source of amusement to me to watch how long and how perseveringly an individual of this species would accompany a ship, even during blowing weather, without the appearance of having any object in view, or of suffering any fatigue or inconvenience. It is rarely observed to settle on the water, and if it does, it rarely continues passive longer than appears to be necessary to enable it to seize and devour what may have induced it to rest.

The peculiar arrangement of the dull brownish-red colour, mentioned in the description of the colours of the bird, gives to it when flying an appearance of having the wings and body crossed by a dark coloured band.



PUFFINUS CINEFEUS (young)
(See page 56)

PUFFINUS CINEREUS.—LIN.

AVES.—PLATE LVI.

P. *suprà* fusca, flavo-brunneo-tincta, *infra* cinereo-brunnea; remigibus, rectricibus caudæque tectricibus inferioribus brunneis. Rostro livido-brunneo, ad apicem flavo brunneo. Tarsis antice flavo-brunneis postice externeque brunneo-rubris: oculis brunneis.

LONGITUDO a rostri apice ad basin caudæ 13 unc. 2 lin.; caudæ 3 unc. 10 lin.

PROCELLARIA PUFFINUS ET CINEREA, Lin.

COLOUR.—Above dull amber-brown, faintly tinged with yellowish brown, the scapular and interscapular feathers narrowly tipped with dull wood-brown; the tail and quill feathers deep umber brown; chin and throat dull rusty grey, tinged with lilac-purple; breast, belly, and vent broccoli-brown, tinted with wood-brown, and the breast has besides a lilac-purple gloss; flanks posteriorly strongly shaded with brown; under tail coverts dull umber-brown. Bill at the tip yellowish brown, elsewhere liver-brown. Eyes dark brown. The posterior and outer sides of the tarsi, in the preserved specimen, dark brownish red, the anterior edges yellow, the inner sides yellowish brown; the outer toe brownish red, the middle and inner yellowish brown; the interdigital membranes ochre-yellow, slightly deadened with brownish red; claws yellowish brown, except the tips, which are liver-brown.

FORM, &c.—Figure moderately robust; body rounded. Head slightly compressed, and superiorly arched. Bill slender and subcylindrical, the sides slightly flattened; nasal tube raised above the level of the *culmen*, broad, depressed, and terminated anteriorly by two nostrils, which are separated by a broad septum, with a slope towards the *culmen*, the corneous part of the common tube superiorly not united; *culmen* broad, slightly round and separated on each side from the lateral parts of the bill by a longitudinal furrow, which terminates at the commissure nearly opposite where the cutting edges of the lower mandible begin to curve downwards; the hook of upper mandible compressed and moderately arched from the base, its apical portion perpendicular and acuminate. The lower mandible curved downwards at the

PUFFINUS CINEREUS.

point so as to correspond with the upper, its apex slender and acute, no prominent angle behind apex inferiorly. Tarsi somewhat compressed, and coated with moderately large polygonal scales. Toes, superiorly, covered partly with irregular shaped scales, and partly with transverse *scutæ*: the interdigital membranes near the toes coated with irregular sized scales, those along the inside of outer toe largest; claws pointed and slightly curved, the hinder one somewhat triangular, and placed upon the *tarsus*. Wings long, and when folded extend nearly an inch and a half beyond the tail, first quill feather longest. Tail rounded, the two middle feathers nearly three quarters of an inch longer than the external one of each side.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	2	1
the tip of the tail.....	17	0	of the outer toe	2	0½
of the bill from the angle of			of the middle toe	1	11½
the mouth.....	2	0	of the inner toe.....	1	7½
of the wings when folded.....	11	9	of the hinder claw	0	2½
of the tail	3	10			

The colours of the other sex are not known.

I hesitated long before I came to the determination to regard this bird as the young of *Procellaria puffinus*, especially as Temminck, whose knowledge must be held in great respect by every naturalist, makes the young "*peut-être d'un an*" as very differently coloured from what it must be considered, if our conclusion be correct. His bird of the first year will, if we are not in error, be one of the second year, and Plate 962 of the "*Planches enluminées*" will be the representation of a specimen which has attained its second plumage. Specimens in the garb we have described are common on the Cape seas, and generally seen in company with others, which are doubtless genuine examples of *P. cinerea*; and one of the latter which we possess has tended more than any thing else to satisfy me that the bird just described is the young of the species, as in it the middle of the belly and flanks retain the immature plumage, though elsewhere the feathers have acquired the colours of the adult bird. There are persons who consider it superfluous to represent the young of a species when the adult has been figured, but we disclaim such a belief; we consider information concerning the aspects under which a species appears to be as essential for the naturalist as the knowledge of new species: indeed, until more attention be paid to that, we shall have among the species introduced from day to day many which will be found to be only specimens of known species in particular stages.



COLIBRIS TROPICAL (A Male in Plumage)
 (After J. A. S. M.)

CINNYRIS VERROXI.—SMITH.

AVES.—PLATE LVII.—MALE AND FEMALE.

C. supra griseo-brunneus capitis ; cervicis, dorsi summi, humerorumque plumis ad apicem, viridibus.

LONGITUDO, 5 unc. 11 lin.

CINNYRIS VERROXI, Smith, South African Quarterly Journal, No. 5, page 13, 1831.

COLOUR.—*Male*.—Above intermediate between clove and brocoli-brown, the feathers of the head, upper and lateral parts of the neck, interscapulars and shoulders at the tips, dark bluish-green, with a strong metallic lustre. Quill feathers and tail purplish-brown, the tail darkest, the outer vanes of the quill feathers lightest. Under parts yellowish-grey, the yellow clearest upon the belly ; axillary tufts pale brilliant scarlet, with a silky gloss. Bill, legs, and claws liver-brown.

FORM, &c.—Typical. Bill moderately arched. Wings when folded reach beyond the first half of the tail ; third, fourth, and fifth feathers equal and longest, second and sixth rather shorter, first rudimentary. Tail slightly rounded at the point. Tarsi moderately robust, anteriorly scutellated, posteriorly entire ; toes slender, the hinder one thickest ; claws much curved, those of the hinder toes strongest.

DIMENSIONS.

	In.	Lines.		In.	Lines.
Length from the point of the bill to			Length of the tarsus	0	8½
the tip of the tail.....	5	11	of the middle toe	0	5
of the bill from the gape	1	3½	of the inner toe	0	3¼
of the wings when folded	2	6	of the outer toe	0	3½
of the tail.....	2	3	of the hinder toe.....	0	3

Female.—Above brocoli-brown, the back tinged with green ; under surface of neck and breast brownish-grey, faintly tinged with green ; belly, vent, and

CINNYRIS VERROXI.

under tail coverts yellowish-grey, tinged with green, particularly the flanks ; no axillary tufts : the colours of the other parts similar to those of the male.

Only a very few specimens of this bird have yet been found in South Africa, and none, as far as I know, within the limits of the Cape Colony. Kafirland, and the country eastward of it, towards Port Natal, furnished the specimens we possess. Like the other species of the group, it feeds upon small insects, and these it collects partly from the branches and leaves of brushwood and dwarf trees, and partly from flowers.

The birds of the genus *Cinnyris* have generally been regarded as feeding upon the saccharine juices which exist in flowers, but as far as my experience goes, I should be inclined to consider them as giving a preference to insects. In those I examined, I found the bulk of the contents of the stomach to be insects, though at the same time each contained more or less of a saccharine juice. The acquisition of a certain portion of the latter is not easily to be avoided, considering the manner in which they insert their bills into flowers, but the consumption of insects of a size such as I have found in their stomachs, might easily be obviated, provided these were not agreeable to their palates, and not actually a description of food which they by choice selected.

In the same country in which we found this bird we discovered another species of the genus, *Cinnyris*, which appears to us yet undescribed, and which we shall hereafter figure under the name of *Cinnyris olivaceus*. The colour of this species, above, is intermediate between grass and olive-green, the head being strongly tinged with blue ; below, it is light yellowish-green, with an orange tint on the throat, and on each *axilla* there is a small tuft of brilliant yellow feathers. Length, from the base of the bill to the point of the tail, five inches ; length of the bill, one inch, three lines.



CIR. 117. MALLARD. YOUNG
(PL. 58)

CIRCUS MAURUS.—TEMME.

AVES.—PLATE LVIII.—YOUNG FEMALE.

C. suprà brunneo-ruber, plumarum plurimis subrufo-marginatis, infrà rufo-albus brunneo-strigatus, nuchâ albo brunneoque variegatâ; remigibus externè griseis, interne versus basin albis brunneo-maculatis, versus apicem brunneo-rubris; caudâ nigro-brunneâ, fasciis quatuor subgriseis notatâ, plumarum apicibus rufo-albis. Oculis flavis. Rostro nigro-brunneo; pedibus flavis.

CIRCUS LALANDI, *Smith*.—South African Quarterly Journal, vol. i. page 383. 1830.

COLOUR.—The upper surface of head blackish brown, the feathers of vertex broadly margined with rufous; nuchal feathers white, variegated with brown, the latter colour in oval blotches, one reaching the tip of each feather; the rest of the upper parts reddish brown with most of the feathers broadly tipped with a colour intermediate between sienna and cream-yellow; upper tail coverts white. The sides of head white, tinged with sienna yellow, and delicately streaked longitudinally with brown; chin white, the shaft of each feather brown. The rest of the under parts between ochre and sienna-yellow, the breast and anterior part of belly nearly white; the throat, anterior part of breast, flanks and outer surface of legs blotched with brownish red. The cervical collar behind the ear coverts deep brownish red, elsewhere of the same colour as the throat. Tail feathers white at their base, then brownish red, the latter colour being crossed by three transverse light coloured bars, which on the middle feathers are smoke-grey with a satin-lustre, on the lateral feathers white with a sienna yellow tint, the tips of all the feathers of the latter colour; the outer vanes of quill feathers hoary grey, the inner vanes towards base white, imperfectly barred with brown, towards points liver-brown. Bill blackish brown, the base of lower mandible yellowish. Legs and toes yellow; claws the same colour as bill. Eyes yellow.*

* ADULT.—Upper tail coverts white; the outer vanes of the primary and secondary quill coverts as also of the quill feathers rusty lavender-purple, the inner vanes towards quills white, towards tips blackish brown. Tail blackish brown, with four rusty smoke-grey bands, the tip of each feather the same colour; the whole of the remaining plumage a uniform blackish brown.

CIRCUS MAURUS.

FORM.—Typical. Cervical collar moderately prominent. Bill much hooked ; nostrils rounded and coated with rigid bristles. Wings long, and when folded reach to the last third of the tail, the third and fourth quill feathers equal and longest, the second and fifth equal and about three-fourths of an inch shorter than the fifth, the first about two inches and a half shorter than the second. Tarsi long and strong, anteriorly scutellated, on the sides covered with small polygonal scales, and behind by two rows of irregular plates. The outer toe connected to the middle one at the base by a distinct semicircular web. Claws much curved and pointed.

DIMENSIONS.

	In.	Lines.		In.	Lines.
Length from the point of the bill to			Length of the tarsus	2	9
the tip of the tail.....	23	0	of the outer toe	0	11½
of the bill from the angle of the			of the middle toe	1	4
mouth	1	4	of the inner toe	0	9
of the wings when folded	14	6	of the hinder toe.....	0	7½
of the tail.....	12	0			

The *male* of like age is marked with similar colours.

The bird, of which the foregoing is a description, was killed in the month of January, the last of the summer months in South Africa. The species occurs along both coasts of the colony, and the greatest number of specimens are observed in the vicinity of marshes or inland lakes. When they are seen they are generally flying languidly along near the surface of the ground or over the bush by which the country may be coated, and from time to time suddenly descending to the earth as if to capture some prey. When they are successful in accomplishing this, they either immediately rise with it in their talons, be it a mouse, frog, lizard, or bird ; or else, which is their more common practice, rest on the spot where the seizure is effected, until they have consumed whatever may be the article of food ; on that being completed, they take again to the wing, and continue their circuit after the manner already described. This species generally constructs its nest in marshy situations, and places it either on the ground or low among the reeds which generally occur in such localities. It lays three or four eggs.



TRICOPHORUS FLAVIVENTRIS.
(Aves. Plate 59)

TRICOPHORUS FLAVIVENTRIS.—SMITH.

AVES.—PLATE LIX.

T. *suprà* subolivaceus, *subtus* flavescens ; abdomine flavo.

LONGITUDE ab apice rostri ad basin caudæ 4 unc. 10 lin. ; caudæ 4 unc. 2 lin.

TRICOPHORUS FLAVIVENTRIS, *Smith*.—South African Quarterly Journal, New Series, vol. i. page 143 ; 1834.

COLOUR.—The top and the sides of the head, the back and the sides of the neck, the interscapulars, the back, the shoulder coverts, the outer vanes of the quill feathers, and the tail feathers brownish green or rather a colour intermediate between oil-green and yellowish brown, darkest on the head, the yellowish brown is most conspicuous on the tail ; the inner vanes of the quill feathers chocolate-red, each edged towards its base with straw-yellow. The chin and throat sulphur yellow ; breast a muddy wine-yellow ; belly, vent, and under tail coverts between lemon and king's-yellow. Bill at base livid brownish red ; towards tip pale broccoli-brown. Eyes dark brown. Legs and toes brownish red.

FORM, &c.—Figure moderately slender. Bill rather short and strongly compressed in front of the nostrils, the edges of both mandibles slightly bent inwards, the tip of the upper mandible faintly hooked, and behind the hook a slight notch. Nostrils subovate, situated close to the base of the mandible, and margined superiorly with a delicate membranous expansion, a few long and strong bristles near the angles of the mouth ; nape with a few setaceous bristles, which are prolonged considerably beyond the feathers. Wings short and rounded, the primaries but little longer than the secondaries ; the fourth, fifth and sixth quill feathers equal and longest, the third and seventh rather shorter, the second and eighth a little shorter and about the length of the secondaries, the first about half the length of the second. Tail long and slightly rounded. Legs rather short and slender ; tarsi anteriorly scutellated, posteriorly entire. Toes slender, the hinder toe the strongest ; claws short, slender, pointed, and strongly curved.

TRICOPHORUS FLAVIVENTRIS.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	0	10½
the tip of the tail.....	9	0	of the outer toe	0	4½
of the bill from the angle of the			of the middle toe	0	7
mouth	0	11	of the inner toe.....	0	4½
of the wings when folded.....	4	0	of the hinder toe	0	5
of the tail	4	2			

This bird is entirely confined to thickets, and I have never observed it leave them, nor even resort to the ground they covered in quest of food. It moves with activity among the branches of the brushwood or trees in which it resides, and while so occupied, appears to be in search of insects. It is extremely shy, and if discovered in situations where the foliage is scanty, it immediately retreats towards some spot with a denser covering; in that it remains perfectly inactive until the object which excited its fears retires from its neighbourhood.

Specimens are readily to be obtained in the vicinity of Port Natal, and in the districts to the East of it; but I never myself saw any to the Westward of that place, nor have I ever heard of any having been found there by others. It is the only species which has yet been discovered in Southern Africa.



SPARROW, YOKALAND
(S. P. 1000)

COSSYPHA NATALENSIS.—SMITH.

AVES.—PLATE LX.—MALE.

C. capite, cerviceque aurantio-brunneis, aurantio-tinctis; dorsi summo, humerisque purpureo-cœruleis; dorsi imo, rectricibus duabus intermediis, dimidioque rectricis externæ exceptis, partibusque inferioribus rubro-aurantiis; rectricibus intermediis, dimidio rectricis externæ, remigibusque brunneis, his externè cœruleo-griseo-marginatis; oculis brunneis.

LONGITUDO ab apice rostri ad basin caudæ 4 unc. 3 lin.; caudæ 3 unc. 3 lin.

COLOUR.—The upper parts of the head and neck orange-coloured brown tinted with gall-stone-yellow, the latter clearest upon the neck; the interscapulars, scapulars, back and lesser wing coverts bright lavender-purple variegated with gall-stone-yellow, many of the feathers, particularly the interscapular ones, being of that colour towards the base of their inner vanes. The posterior part of the back, the rump, the upper tail coverts, the inner vane of the outermost tail feather of each side, and the four next to it intermediate between gall-stone-yellow and deep reddish orange. The front, eyebrows, space before eyes, sides of head and all the under parts bright gall-stone-yellow, the belly and vent lightest. The primary and secondary quill coverts, the primary and secondary quill feathers, the outer vane of the outermost tail feather of each side and the two middle ones light chocolate-red; the primary quill coverts and quill feathers, with the exception of the two outermost and three innermost of the latter, distinctly margined externally with lavender-purple, the last mentioned three and a few of the secondary quill coverts are edged and tipped with light gall-stone-yellow, and each of the latter has a spot of the same colour but of a brighter hue at its point.* Bill brownish red, darkest at the base. Legs and toes a flesh-colour tinged with brown. Eyes dark brown.

FORM, &c.—Figure rather slender. Bill nearly straight, the upper man-

* Owing to this circumstance we are disposed to regard this as an immature bird, and as the feathers of the head and neck are at their base of the same colour as the interscapular feathers, we are inclined to believe that the head, neck, and back will be found to be of one uniform tint, when the bird shall be obtained with the adult plumage.

COSSYPHA NATALENSIS.

dible slightly notched near the tip, its sides convex, the culmen obtuse but distinct; the apex of lower mandible recurved within the sides of the upper one. Wings short and rounded, the fourth quill feathers the longest, the third and fifth equal and slightly shorter, the second and seventh equal and half an inch shorter, the first about half the length of the fifth. Tail slightly rounded. Tarsi long and moderately strong, distinctly scutellated anteriorly towards the toes; the outer, inner and hinder toes nearly of equal length, the latter thickest. Claws long, slender, pointed, and moderately curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsi	1	2 $\frac{1}{2}$
the tip of the tail	7	6	of the outer toe.....	0	4 $\frac{1}{2}$
of the bill from the angle of the			of the middle toe	0	7
mouth	0	8 $\frac{1}{2}$	of the inner toe.....	0	4 $\frac{1}{2}$
of the wings when folded.....	3	6	of the hinder toe	0	4
of the tail	3	3			

The colours of the *female* not known.

The specimen, which has furnished us with the characters of this species, was procured in the neighbourhood of Port Natal, and as only it was obtained, though the woods were well hunted by my party, I am disposed to consider the species as rare even in that district. It was shot close to the edge of an extensive forest, and the natives, who saw it after it was killed, gave us to understand it was a shy bird, and that though it often sought its food upon the ground, it was more generally observed upon trees. Its food consists of insects, and, from our informants, we learned it to have many of the habits of *Cossipha vocifera*, a bird not uncommon within the limits of the Cape Colony. Like the latter it frequently descends to the ground under or about its retreat, and there feeds with activity until disturbed, when it instantly betakes itself to some tree, upon which it remains at rest until the object which causes the alarm shall have passed away.



PYRENESTES FRONTALIS.—SWAINSON.

AVES.—PLATES LXI. AND LXII.

Aris adulta.—P. fronte albâ ; capite, cervice pectoreque antice aurantio-brunneis ; dorso, alis, caudâque nigro-brunneis ; rectricibus ad basin albis, speculum album formantibus ; pectore postice abdomineque brunneo-griseis ; rostro ad basin nigro-brunneo, antice flavo-griseo, subochreo-umbrato ; oculis brunneis ; pedibus brunneo-rubris.

LONGITUDO ab apice rostri ad basin caudæ 4 unc. 4 lin. ; caudæ 3 unc.

Aris jun.—Suprà obscure aurantio-brunneus, plumis flavo-brunneis marginatis ; subtus albus, brunneo-strigatus ; rectricibus concoloribus ; rostro aurantio ad basin et apicem nigro-brunneo-maculato.

PYRRHULA ALBIFRONS, *Vigors*.—Proceedings of the Zool. Soc. of London for 1830, p. 92.

PYRENESTES FRONTALIS, *Swains.*—Lardner's Cyclopædia, Birds, vol. ii. page 277.

ADULT.—PLATE LXI.

COLOUR.—The feathers on each side of the base of the upper mandible white ; the rest of the head, the neck, the interscapulars and the anterior portion of the breast rusty orange-coloured brown, the interscapulars tinged and fading behind into black brown, which is the colour of the back and upper tail coverts. The lesser wing-coverts, the quill-coverts, the quill-feathers, and the tail blackish or umber-brown ; the wings with a white *speculum* formed by all the quill-feathers being white at their base. The posterior portion of the breast, the belly, and the under tail coverts dark brownish grey, obscurely tinted with orange-coloured brown. The base of the upper mandible and the under surface of the lower one livid blackish brown, the other portions dull yellowish grey, clouded with cream-yellow. Legs and toes brownish red. Eyes dark brown.

FORM, &c.—Bill large, powerful, and conical, the culmen entering deeply between the feathers of the forehead, broad and flattened superiorly, and gradually curved to the point ; the sides of the bill are compressed, its apex pointed, and the cutting margins of both mandibles slightly sinuated ; the lower mandible with a rounded angle close to the angle of the mouth. Wings rounded, and when folded they reach nearly to the commencement of the second half of the tail ; the fourth and fifth quill-feathers equal and longest, the third and sixth scarcely shorter, the second and sixth rather shorter, and the first about one-third of the length of the fifth, and narrow. Tail slightly rounded. Legs and toes robust, the tarsi distinctly scutellated in front ; claws strong and much curved and pointed.

PYRENESTES FRONTALIS.

DIMENSIONS.

Inches. Lines.		Inches. Lines.	
Length from the point of the bill to		Length of the tarsus	1 1½
the tip of the tail.....	7 4	of the outer toe	0 5
of the bill from the angle of		of the middle toe.....	0 9
the mouth	0 9	of the inner toe	0 6
of the wings when folded.....	3 9	of the hinder toe	0 5
of the tail.....	3 0		

The colours of the other sex not known.

(*Bird of the Second year.* Plate LXII a.)

COLOUR.—The front, the head, and the neck dull orange-coloured brown, the feathers margined with yellowish brown; the interscapulars, back, and rump umber-brown, the feathers tipped with yellowish brown. The lesser wing coverts, the quill coverts, and the quill and tail feathers dark liver-brown, with light sienna-coloured tips, the base of wing feathers white. The breast, belly, vent, and under tail coverts dirty chocolate-red, the feathers edged and tipped with pale cream-yellow. Bill at base and tip liver-brown, elsewhere pale orange-yellow. Legs and toes liver-brown.

(*Young bird.* Plate LXII b.)

Above dusky orange-coloured brown, the feathers narrowly margined with pale yellowish brown; below white, freely blotched with chocolate-red, the blotches in the form of longitudinal stripes, one along the middle of each feather. Quill and tail feathers dirty brownish-red, the outer vanes faintly edged with yellowish brown; no white at the base of the quill feathers, hence the white speculum, found in the adult, is absent. The tip of the upper and the base of both mandibles livid liver-brown, elsewhere the bill is nearly of a Dutch-orange colour.

This is the only species of the groupe which has yet been found in South Africa. Its bill is very powerful, and is, with regard to size and strength, unapproached by any of the other *Fringillidæ* of that country. Owing to the sides being moderately compressed, or at all events, not so convex as in the larger-billed species of the tribe, it exhibits a peculiar description of culmen, being especially towards its base broad and perfectly flat; this appearance it presents for more than half its length, and anteriorly, is separated on each side from the lateral parts of the bill by a well defined longitudinal groove, which originates on the inner side of the anterior extremity of the nostrils.

Most of the *Fringillidæ* of South Africa resort to localities which abound in brushwood or dwarf trees. *Pyrenestes frontalis*, on the other hand, inhabits exclusively the forests, and never condescends to visit but the largest trees, hence it is only very partially scattered over the country. The only specimens which have been obtained within the limits of the Cape Colony were discovered in the forests upon the eastern frontier. About Port Natal, however, the bird is not so rare, and specimens are readily to be obtained there at all seasons of the year. It feeds principally upon berries and small fruits.



CYFENESTES FRONTALIS (A 2nd Year B. Year)
(Aves Plate 67)



FIG. 17. — FRIGATEBIRD, *FREGATA A. G. G. G.* (Aves, 1866.)

HALCYON SENEGALOIDES.—SMITH.

AVES.—PLATE LXIII.—MALE.

H. capite fusco-griseo ; corpore suprâ cœruleo-beryllino, subtus albido ; remigibus tricoloratis,—cœruleo-beryllino, alboque brunneo ; caudâ dorsoque concoloribus ; rostro rubro ; pedibus purpureo-rubris.

LONGITUDO ab apice rostri ad basin caudæ 6 unc. 6 lin. ; caudæ 2 unc. 10 lin.

HALCYON SENEGALOIDES, *Smith*.—South African Quarterly Journal, second series, vol. i. p. 143 ; 1834.

COLOUR.—The upper surface of the head and the back of the neck dusky smoke-grey, tinted with dull verdigris-green ; the feathers of the top of the head variegated with narrow, light, reddish brown bars. The interscapulars verdigris-green, the colour changing in certain lights to light azure-blue ; the back and a few of the feathers at the tips of the shoulders bright cobalt-blue. The shoulders, lesser wing-coverts, and secondary quill-coverts velvet-black ; the primary quill coverts greenish blue tipped with brownish red, the shafts and a portion of each inner vane towards the quill the latter colour. The basal half of the outer vane of each primary quill feather intermediate between verdigris-green and ultra-marine blue, the corresponding portions of inner vanes white with a satin lustre, the last half of each feather deep liver-brown ; the secondary and tertiary quill feathers exhibit the same colours, only the blue occupies most if not all of the outer vanes, while the white exists only towards the base of each inner vane, and the liver-brown towards the point. Tail feathers greenish blue like the outer vanes of wing feathers, the shafts brownish red. The chin, the throat, the belly, the vent, and the under tail coverts reddish white, the breast and flanks greenish white finely freckled with dusky-brown. The feathers between the eyes and the base of the bill as well as the lower eyelids black, and between the nostril and the eye there is a narrow whitish stripe, from the feathers in that situation being white towards their base. Bill scarlet-red. Eyes dark brown. Legs, toes and claws dull purplish red.

FORM, &c.—Figure robust. Head large ; bill strong and quadrangular, the upper mandible considerably longer than the lower, pointed at the tip, and channelled internally. Nostrils small, suboval, and extending parallel to the feathers at the base of the bill and nearly in contact with them. The feathers in front of eyes scanty, short, and wiry. Wings short and rounded, the

HALCYON SENEGALOIDES.

third, fourth, and fifth quill feathers longest, and nearly of the same length, the second and sixth slightly shorter, the first about half an inch shorter than the longest. Tail square or in the slightest degree rounded. Legs and toes slender, the inner and hinder toes about half as long as the middle toe, the latter rather longer than the outer toe, to which it is closely united as far as the second joint.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	0	7
the tip of the tail.....	9	4	of the outer toe.....	0	8
of the bill from the angle of			of the middle toe	0	9
the mouth.....	2	6	of the inner toe.....	0	5
of the wings when folded.....	4	3	of the hinder toe	0	4½
of the tail	2	10			

If ever it shall be satisfactorily established that locality is capable of modifying the colours or size of animal beings, and of perpetuating those in all the individuals of the species within a certain limit, then we shall find no difficulty in incorporating *Halcyon Senegalensis* (*Alcedo Senegalensis*,—Lin.) with the bird here described. Until it be shown, however, that climate has that power, and until we are made acquainted with the groupes over which it possesses the influence, we are not disposed to admit the propriety of classing together any two beings which are, as far as general appearances are concerned, very similar, yet which are constantly and palpably different, in regard to certain points. We have, for instance, in Southern Africa, many birds which are identically the same with others found in Sierra Leone, but in these we perceive no marked differences, either in their colouring or proportions, that is, none greater than are found to exist among the individuals of either locality viewed by themselves. In other cases, again, we have birds in South Africa bearing a strong general resemblance to species which are inhabitants of Western Africa, yet, at the same time presenting certain permanent peculiarities not essential apparently either to the interests or well-being of the birds, and though trifling, they are nevertheless so manifest as to permit of their being made available characters for distinguishing the birds of the one locality from those of the other.

The general resemblance between our bird and *H. Senegalensis* is striking; the bill, however, of the former, is entirely red; while, on the other hand, the lower mandible of the latter is always black or brownish red; the general colours of our bird are also much brighter; the size of the South African bird is greater, that of the bill much greater.

Like the other known species of the groupe, *H. Senegaloides*, resorts to thickets, and feeds upon insects, especially *crustacea* and *gryllæ*.



TEXTOR ERYTHRORHYNCHUS.
(Aves-Plate 64)

TEXTOR ERYTHORHYNCHUS.—SMITH.

AVES.—PLATE LXIV. (MALE.)

T. brunneo-niger; pectoris lateribus plus minusve albo variatis; remigibus primariis versus basin albis; rostro flavo-rubro; oculis rubro-aurantiis.

LONGITUDO corporis cum capite 5 unc. 4 lin.; caudæ 4 unc.

BUBALORNIS NIGER, *Smith*, Rep. of Exped. App. page 52, 1836.

COLOUR.—The head, the upper and under parts of the body, the last half of each primary quill feather, all the secondary quill feathers and the tail, blackish-brown; the first half of each primary quill feather white, and the outer vanes of a few of those nearest to the secondaries margined with the same colour almost to their points. Bill light yellowish-red, clouded with shades of purple-red. Legs and toes yellowish brown, the former tinted with yellowish red; claws livid umber-brown. Eyes dark brown.

FORM, &c.—Head rather small. Body robust. Bill strong, conical, and pointed, very like that of a typical *Ploceus*; the culmen slightly arched, and entering between the feathers of forehead, flattened at base, anterior to nostrils rounded; nostrils nearly circular, and without membranous edging; the commissure of bill slightly waved. A few short rigid bristles at the angles of the mouth. Wings rather short and rounded, when folded they reach to nearly the commencement of the second-third of the tail, the first quill feather is narrow, and about an inch and a half in length, the third, fourth, and fifth are longest and nearly equal, the second and sixth equal and slightly shorter than the fifth; the secondary quill feathers about half an inch shorter than the longest primaries. Tail rather long, and slightly rounded at the point. Tarsi robust, distinctly scutellated anteriorly, entire behind; toes strong and rather short, the outer and inner ones nearly of equal length, and a little shorter than the middle one, hinder toe stronger than the fore ones; claws strong, short, slightly curved, and blunt at the points.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	2½
the base of the tail.....	5	4	of the middle toe.....	0	9
of the bill to the gape.....	0	11½	of the outer toe	0	6
of the wings when folded.....	4	6½	of the inner toe	0	5¾
of the tail.....	4	0	of the hinder toe	0	5

TEXTOR ERYTHORHYNCHUS.

In the female the *brown* tint is more distinct than in the male ; in other respect their colours are very similar. In young birds the general colour is a dusky liver-brown, and the feathers of the breast and belly are in them broadly margined with white. In adult specimens slight indications of such white margins are often to be observed upon the feathers of the sides of the breast and body.

It was not till after we had passed to the northward of the 25th degree of south latitude that we discovered this bird ; and if we are to believe the natives, it rarely extends its flight farther to the southward, which they attribute to the scarcity of Buffaloes south of that parallel. Wherever it was discovered it was always in attendance upon herds of the animals just mentioned, and either flying over the members of which the group was composed, or else perched upon the back of some individual animal. While perched, it appeared, generally, to be employed in collecting articles of food from the hide ; and while so occupied it passed quickly from one part of the Buffalo to another, without the latter appearing to bestow the slightest attention upon its movements. On opening the stomachs of the specimens we procured we found, what we had been led to expect, namely, that its food consisted in part at least of parasitical insects ; and that to obtain them it selected the company in which, as has already been remarked, we always found it. According to the evidence of the natives, it also frequently alights upon the ground, examines the excrement of the Buffalo, and from it collects certain articles of food. Sometimes a number of individuals were observed associated with a herd of the quadrupeds in question, frequently only one or two, and on many occasions we encountered troops of Buffaloes without even one in attendance. This bird, besides being of service to its huge associates, by ridding them of many of the insects with which their skins are infested, also performs for them another valuable service. On observing any unusual appearance in the neighbourhood, its attention is immediately directed to it ; and if alarm is eventually excited the bird flies up, upon which all the buffaloes instantly raise their heads, and endeavour to discover the cause which had led to the sudden departure of the sentinel. If they are successful in the attempt, and see reason to fear for their own safety, they take to flight in a body, and are accompanied by the birds who forewarned them of their danger. On the herd again halting to feed, the birds return to their avocation, and pursue a course similar to that we have just described, provided the like circumstances recur. We never found this bird attaching itself to any quadruped but the Buffalo, nor did we ever find the latter with any other attendants, though we found in the country in which both exist, two other birds in the habit of feeding upon parasitical animals, namely *Buphaga Africana* and *Erythrorhyncha*. These restricted their visits exclusively to the Rhinoceros.



PLOCEUS MAHALI
(Aves Plate 65)

PLOCEPASSER MAHALI.—SMITH.*

AVES.—PLATE LXV.—MALE.

P. fronte, capite suprâ, nuchâ, taniolâque ab angulo oris ad cervicem nigro-brunneis; cervice suprâ, dorsoque pallidè flavo-brunneis; alis faciis duabus transversis flavo-albis notatis; subtus albus, pectore ventrequè rufo-flavo-tinctis. Rostro pedibusque flavo-brunneis, brunneo-rubro umbratis. Oculis profundè rubro-aurantiis.

LONGITUDO corporis cum capite, 4 unc. 2 lin.; caudæ 2 unc. $6\frac{1}{2}$ lin.

COLOUR.—The forehead, the top of the head, the nape, the lores, and a stripe from the angles of the mouth to the top of the neck, liver-brown; the sides of the head and ear-coverts broccoli-brown, tinged with yellowish brown; eyebrows broad, and of a dusky white colour. The upper and lateral parts of the neck, the interscapulars, the back, and the lesser wing-coverts intermediate between broccoli and wood-brown; the last row of the lesser wing-coverts are broadly tipped with cream-yellow, and thus an oblique band of that tint is formed in front of the quill coverts; the primary and secondary quill-coverts are livid umber-brown, and the latter is broadly tipped with pale cream-yellow, forming a second oblique bar parallel with the one just described. The primary and secondary quill-coverts are light liver-brown, the former narrowly the latter broadly margined with rusty white; the rump and upper tail coverts yellowish white; the tail-feathers liver-brown tipped and narrowly edged externally with rusty white. The chin, the throat, the vent, the under tail-coverts and the thighs dusky white; the breast, the belly, and the flanks dirty cream-yellow, inclining to pale wood-brown. Bill dull yellowish brown, shaded with brownish red; legs, toes, and claws the same colour. Eyes deep brownish orange.

FORM, &c.—Figure rather robust, and when the bird is perched, or moving on the ground, it has much of the appearance of a *Ploceus*. Head rather large; bill conical, pointed, and slightly compressed at the sides; the lower mandible received between the cutting edges of the upper; the culmen slightly arched, and entering between the feathers of the forehead. Wings moderately long, and rather rounded, the longest primaries about three-quarters of an inch longer than the secondaries; when closed they reach rather beyond the first half of the tail; the first quill feather rudimentary, the second and third equal and longest, the fourth slightly shorter; tail square at the point, or very slightly forked. Tarsi and toes robust, the former with

* *Plocepasser*, Smith, June, 1836. *Agrophilus*, Swainson, 1837

PLOCEPASSER MAHALI.

distinct *scuta* in front, entire behind; the outer and inner toes of equal length, the hinder one slightly shorter, but stronger, the middle one much the longest. Claws of the front toes slightly curved and pointed; those of the hind ones with a greater curvature, and considerably stouter.

DIMENSIONS.

	Inch.	Lines.		Inch.	Lines.
Length from the point of the bill to the			Length of the tarsus	0	10 $\frac{1}{2}$
tip of the tail	6	6 $\frac{1}{2}$	of the middle toe	0	7
of the bill from the gape	0	8 $\frac{1}{2}$	of the outer toe	0	4 $\frac{1}{4}$
of the wings when folded	4	1 $\frac{1}{2}$	of the inner toe	0	4 $\frac{1}{4}$
of the tail	2	6 $\frac{1}{2}$	of the hinder toe.....	0	3 $\frac{1}{2}$

The *Female* in respect of colours is very similar to the male.

On our first seeing this bird upon a tree on one of the tributary streams of the great northern branch of the Orange River, we found it a matter of difficulty even to surmise what would be its position in our systems of ornithology. Its figure, viewed either when it was perched on the tree, or resting upon the ground, had much resemblance to that of a *Ploceus*; while its colour, habits, &c., bespoke its close alliance to the Sparrows; and the discovery of a tree, studded with their nests, tended to support the idea of such a double relationship. The nests, as far as figure and texture were concerned, had many of the characters of those of *Ploceus*; while from the manner in which they were armed they resembled those of some of the *Pyrgita* of Southern Africa. The entire of the walls of each nest was composed of stalks of grass, the thickest extremities of which were so placed as to protrude externally for several inches beyond the more compact structure destined to contain the eggs. By this management each nest appeared armed with numerous projecting spines, and bore considerable resemblance to the body of a Porcupine, when its spines are partially erected. Several of the *Pyrgita* arm their nests after the same fashion, only they select for the purpose the delicate twigs of shrubs or brushwood, instead of stalks of grass: the object of both being the same, to offer an obstacle to the advance of snakes towards the reservoir of their eggs and young ones. A solitary specimen of *Plocepasser* is seldom seen; it is a bird disposed to congregate, and we met with small, and even occasionally with large flocks, as far north as the Tropic of Capricorn. The disposition for society is also evinced during the breeding season, when oftentimes twenty or thirty nests are to be seen upon one tree, and disposed as represented in the back ground of the plate. It feeds upon seeds and small insects, and in search of these it passes much of its time upon the ground. When disturbed while so employed, the whole of the individuals of the flock move away in a body, and resort to some tree in the neighbourhood, upon which they remain until they are satisfied that they may with safety return to their labours. This and *Ploceus superciliosus* of Ruppell are the only species of the groupe yet known, and as *Plocepasser* was employed by me to designate the groupe more than twelve months before the term *Agrophilus* was proposed by Swainson, the species must stand as

Plocepasser Mahali, *Smith*.

Plocepasser Superciliosus—*Agrophilus superciliosus*, *Swainson*.





PLOCEUS SPILNOTUS. ♂. 11. 16.
 PLOCEUS CAENSI. ♂. 11. 16.
 (P. P. 11. 16.)

PLOCEUS SPILONOTUS.—VIGORS.

AVES.—PLATE LXVI.—Fig. 1.—MALE.

P. capite suprâ, cervicis lateribus anticè, corporeque subtùs aurantio-flavis; gulâ, jugulo, dorsoque summo nigris, hoc flavo-maculato; remigibus fuscis externè flavo-marginatis; rectricibus olivaceis, flavo-marginatis; rostro nigro, brunneo-nebulato; oculis rubris; pedibus carneis, brunneo-tinctis.

LONGITUDO corporis cum capite 4 unc. 5 lin.; caudæ 2 unc. 7 lin.

PLOCEUS SPILONOTUS.—*Vigors*, Proceedings of Zoological Society, p. 92, June, 1831.

PLOCEUS STICTONOTUS.—*Smith*, South African Quarterly Journal, No. 5, p. 11, Oct. 1831.

PLOCEUS FLAVICEPS.—*Saunders*, Birds of Western Africa, vol. viii. of Naturalist's Library, by Sir William Jardine, p. 259. 1837.

COLOUR.—The upper parts of the head gamboge-yellow slightly glossed with honey-yellow; the sides of the head, the chin, and a narrow line stretching from the latter to the breast, dark liver brown verging on black; the sides of the neck immediately behind the ear coverts, the breast, the belly, the vent, and the under tail coverts light gamboge-yellow, the lateral parts of the breast tinted with saffron-yellow. The lower part of the back and sides of neck, the interscapulars, and the back, liver-brown, each feather broadly tipped with lemon-yellow; rump yellow, blotched with liver-brown. Lesser wing coverts, primary and secondary quill coverts and quill feathers light chocolate-brown, the primaries and their coverts edged externally with king's-yellow, the others tipped and edged on both vanes with the same colour. Tail light greenish brown, the feathers faintly margined externally with king's-yellow, and internally with primrose-yellow. Bill brownish black. Eyes deep vermilion-red. Feet flesh-coloured, tinted with brown; claws a pale horn-colour.

FORM, &c.—Typical. Figure rather robust. Head narrow; bill long, pointed, moderately thick, and nearly straight. Wings rounded, and when folded reach to the commencement of the second third of the tail; the first

PLOCEUS SPILONOTUS.

quill feather rudimentary, the third, fourth and fifth, longest and equal, the second rather shorter than the third. Tail slightly rounded at the point. Tarsi robust, in front scutellated, behind entire, the divisions between the scuta strongly marked; toes, particularly the hinder ones, large; claws strong, and much curved.

DIMENSIONS.

	Inch.	Lin.		Inch.	Lin.
Length from the point of the bill to the			Length of the tarsus.....	1	1
tip of the tail	7	0	of the outer toe	0	6
of the bill from the gape.....	0	11	of the middle toe.....	0	8
of the tail.....	2	7	of the inner toe	0	6
of the wings	3	6	of the hinder toe	0	5

Nothing is known of the *female*.

This species inhabits the districts bordering upon the south-east coast; but I have not seen nor heard of its having been found to the westward of Kafirland. Specimens are but rarely discovered, and these are generally found upon the margins of rivers. From the trees which overhang the waters they suspend their nests, which are of a somewhat kidney form, and composed of blades of grass so closely interwoven, that they form a complete protection against the weather. The female lays three or four eggs, which are of a delicate greenish blue colour, and about the size of those of the common sparrow—*Pyrgita domestica*.

It was not till after this bird had been figured in company with *Ploceus Capensis*, that we recollected it had been represented by Swainson (Birds of Western Africa) under the name of *Ploceus flaviceps*, and in such a manner as to render any second figure quite superfluous.

PLOCEUS CAPENSIS.—SMITH.*

AVES.—PLATE LXVI.—FIG. 2.—MALE.

P. fronte, gutture, pectoreque aurantiis; vertice, abdomineque flavis; nuchâ, dorso, caudæque tectricibus superioribus subsulphureis; cervice, regione interscapulari, humerisque viridi-flavis, brunneo-umbratis; alarum tectricibus remigibusque purpureo-brunneis, externe flavo-marginatis; caudâ olivaceo-brunneâ, plumis externè flavo-marginatis; rostro livido-brunneo; oculis pallidè rubris; pedibus carneis.

LONGITUDO corporis cum capite $4\frac{1}{2}$ unc.; caudæ $2\frac{1}{2}$ unc.

PLOCEUS ABYSSINICUS.—*Cur. Lesson*, Traité d'Ornithologie, tom. i. p. 434, 1830.

PLOCEUS CAPENSIS.—*Smith*, Proceedings of South African Institution, 1832.

COLOUR.—Front, chin, throat, and breast saffron-yellow; top of head, sides of neck, belly and under tail coverts gamboge-yellow; nape, back, and upper tail coverts intermediate between lemon and honey-yellow; back of neck, interscapulars, and shoulders greenish yellow, faintly clouded with pale olive brown—the middle of each feather being of the latter colour. Lesser wing coverts, primary and secondary quill coverts, and the quill feathers dark purplish brown, the outer vanes edged with sulphur-yellow, and the tips of all, except the quill feathers, of the same colour. Tail above olive brown tinted with yellow, beneath pale sulphur-yellow, the outer vanes of all the feathers distinctly edged with greenish yellow. Bill livid brown. Eyes light red. Feet and claws flesh-coloured.

FORM.—Typical. Bill long, straight, conical, and pointed; wings when folded reach to the commencement of the last half of the tail, the first quill-feather rudimentary, the second, third, and fourth equal and longest, the fifth

* This species stands labelled in the Museum of the Jardin des Plantes as *Ploceus Abyssinicus*, Cuv.; and by the same name it has also been indicated by Lesson. Under that name we also should have published it, had not *Loxia Abyssinica* been referred to *Ploceus*, when the groupe was first established, and consequently from that moment constituted, according to custom, the proper *Ploceus abyssinicus*. The circumstance also of the species not being found in Abyssinia, likewise renders the name objectionable.

PLOCEUS CAPENSIS.

rather shorter. Tail slightly rounded at the point. Tarsi and toes very strong; the former scutellated in front and entire behind. Claws, particularly those of the middle and hinder toes, strong and much curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	1	2
the tip of the tail	7	0	of the outer toe.....	0	6½
Length of the bill from the gape	1	0	of the middle toe.....	0	9
of the wings when folded.....	3	6	of the inner toe.....	0	6
of the tail.....	2	6	of the hinder toe.....	0	5½

The colours of the *female* are less brilliant, the front, top of the head, and all the under parts being nearly of the same hue. In birds of the first year the upper parts are intermediate between yellowish and greenish grey; the under parts inclined to primrose-yellow; the bill is dull yellowish brown and the feet and claws are of the same colour only brighter.

This species is generally diffused over the more southerly districts of South Africa, and flocks of from ten to forty individuals are often to be seen on or near the edges of marshes and rivers. From the trees or shrubs which fringe these, they suspend their nests, five or six of which are sometimes attached to a single branch. They are formed of coarse grass, and so substantially constructed that each requires some weeks for its completion. They are somewhat kidney-shaped, with the entrance towards the upper end, and directed downwards. Trees which overhang pools of water are invariably preferred, and the twigs which approach nearest to the water are commonly best supplied with nests. There can be no doubt, parental affection dictates the choice. All the birds of South Africa are liable to have their nests robbed by small quadrupeds and snakes, and as no position is so likely to secure them against such misfortunes as those we have mentioned, they are, doubtless, selected under that conviction. During the breeding season, and for some months after the young are fully fledged, each flock continues firmly attached to some chosen locality, and whenever its members are driven from their feeding grounds, they invariably repair to the trees upon which the nests are situated. During the remaining portion of the year they are less stationary, and though they rarely remove from a district where they may have reared young, yet they extend over it, without evincing a marked partiality for any individual spot.



THE GREAT HORNEDEW (BUBO VIRGINIANUS)
(LARGE PLATE)

OTUS CAPENSIS.—SMITH.

AVES.—PLATE LXVII.—MALE.

O. supra pallide rubro-brunneus, subochreo parce vermiculatus et notatus; pectore guttureque rubro-brunneis; ventre flavo-albo; lateribus plumisque femoris subfasciatis; facie subflavâ brunneo-variâtâ; fasciâ cervicale rubro-brunnâ ad guttur ochreo-maculatâ; oculis brunneo-nigris; rostris, pedibus, unguibusque livido-nigris.

LONGITUDO à rostri apice ad basin caudæ 8 unc. $8\frac{1}{2}$ lin; caudæ 6 unc. $3\frac{1}{2}$ lin.

OTUS CAPENSIS, *Smith*.—South African Quarterly Journal, 2nd series, p. 306. 1835.

COLOUR.—The upper and lateral parts of the head, the upper, lateral and under parts of the neck, the interscapulars, the back, rump, and upper tail coverts, the scapular feathers, the lesser wing coverts, and the breast, light reddish brown (snuff-coloured brown), with sienna-yellow variegations. The latter are either scanty or wanting upon the back and anterior part of the breast, but tolerably abundant on the other parts mentioned, and occur in the form of small oblong spots, zigzag, oblique or transverse lines, and irregularly shaped blotches;—the latter are few in number, and restricted to the small wing-coverts. Belly and legs pale ochrey yellow, the flanks and the feathers on the outer and anterior aspects of the thighs barred with arrow-shaped bands of a light brownish yellow colour. False wing-feathers brown, imperfectly barred with sienna-yellow, and most of them margined externally with yellowish white. Primary wing coverts brown, secondary coverts brown, vermiculated and spotted with sienna-yellow. The primary and secondary quill-feathers brown, with three or four broad irregular bars of a colour intermediate between buff-orange and gall-stone-yellow, the last bar at a considerable distance from the points of the feathers, which are obscure white; tertiary quill-feathers brown, the inner vanes barred with yellowish white, the tips dull white. Tail barred, brown and buff-orange, or yellowish white; the light-coloured bars of the inner vanes are generally buff-orange, those of the outer vanes yellowish white. The two middle tail-feathers brown, with two rudimentary or indistinct sienna-yellow bars; their tips are also of the latter colour. The other tail-feathers are yellowish white for some distance from the points. Facial disc pale cream-yellow, powdered or freckled with brown; the bases of the feathers encircling the eyes deep

OTUS CAPENSIS.

blackish brown. Chin white; cervical collar dark brown, variegated where it crosses the throat with small sienna-yellow spots. Egrets reddish brown, vermiculated with sienna-yellow. Eyes blackish brown. Bill, toes, and claws livid brownish black, or a deep horn-colour.

FORM, &c.—Figure moderately slender. Head small and rounded; facial disc small, convex, and ill-defined; the feathers of the disc rigid, wiry, and decomposed, those at and below the inner canthus of the eye directed inwards and forwards, so as to conceal the base of the bill; egrets short and delicate, recumbent, except when the bird is excited. Bill arched from the base, compressed, and the mandible slender towards the point, the hook of the upper one long and slender; nostrils small and rounded; cervical collar rigid, broad at the throat and narrow at its extremities, which are situated some way behind and rather above the level of the eyes. Wings long, and when folded reach to nearly the tip of the tail, the second and third quill-feathers equal and longest, the fourth rather shorter, the first and fifth equal, and about an inch and a quarter shorter than the second;—all the feathers are very broad. Tail rather short and slightly rounded. Tarsi long, and densely covered with short silky feathers. Toes short, moderately strong, and coated with small somewhat circular scales and scattered bristles. Claws long, slender, and slightly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	2	1½
the tip of the tail.....	15	0	of the outer toe.....	0	7
of the bill from the gape.....	1	1½	of the middle toe.....	0	12
of the wings when folded.....	11	0	of the inner toe.....	0	9½
of the tail.....	6	3½	of the hinder toe.....	0	5½

The *female* is rather larger than the male: the colours are the same in both sexes.

This is rather a rare bird in South Africa, and as far as I know, has never been found but in marshy situations. It passes the day among the rushes, reeds, or long grass, and five or six individuals are sometimes found congregated together. When disturbed, they fly only a short distance before they attempt to conceal themselves again, and it is not before they have been several times *flushed* in succession that they seek safety in a prolonged flight. They feed upon mice, lizards, and water insects.





TANERUS SIBICORONATUS
(Aves Plate 68)

LANIUS SUBCORONATUS.—SMITH.

AVES.—PLATE LXVIII.

L. supra nigro-brunneus, griseo-tinctus, infra albus, pectore abdomineque roseo-tinctis; plumis scapularis albis, fasciam obliquam albam formantibus; crisso caudæque tectricibus superioribus cinereis; fronte superciliisque flavo-albis.

LONGITUDO à rostri apice ad basin caudæ 4 unc; caudæ $4\frac{1}{2}$ unc.

COLOUR.—The top of the head, the upper and lateral parts of the neck, the interscapular feathers, and the back, dark umber-brown, with a strong grey gloss; the rump and upper tail coverts dark ash-grey. Wings dark umber-brown, the primary quill feathers and several of the secondaries white near their base, and always some of them narrowly tipped with white. The scapular feathers are pure white, and form a broad oblique band of that colour on each side of the back at the base of the wing. The four middle tail-feathers are liver-brown, the two next on each side liver-brown towards the base, white towards the points, the remaining two of each side white with liver-brown shafts. Throat white, breast and belly dusky white with a rosy tint. The side of the head behind the eye is crossed with a broad brownish black band which passes to the side of the neck; the front and eyebrows are yellowish white. Eyes dark brown. Bill livid brown, and semi-diaphanous. Legs and toes blackish brown.

FORM, &c.—Typical. Bill robust, and rather short, culmen towards frontal feathers rather sharp, hook at apex of upper mandible moderately developed, tooth small and acute. The wings rather long, and when folded reach over the first fourth of the tail; the fourth quill feather rather longest, the third and fifth equal and slightly shorter, the second and sixth equal, and about half an inch shorter than the fifth, the first about half the length of the second. Tail long, narrow and much graduated, the two centre feathers rather the longest, the next on each side rather shorter, the other four successively shorter, the outermost about two inches shorter than the two middle ones. Tarsi and toes moderately robust, the former distinctly scutellated in front, entire behind. The outer and inner toes of equal length, and rather shorter and less robust

LANIUS SUBCORONATUS.

than the hinder toe. Claws of anterior toes long, slender, and slightly curved; the claw of hinder toe strong, and much curved.

DIMENSIONS.

	Inch.	Lines.		Inch.	Lines.
Length from the tip of the bill to the			Length of the tarsus.....		
point of the tail	8	6	of the outer toe		
of the bill from the gape.....			of the middle toe.....		
of the wings when folded ...			of the inner toe		
of the tail	4	6	of the hinder toe		

The grey tint is stronger in the *female* than in the male, and the white is less clear, being generally tinged with yellow.

The first specimen we obtained was killed near Latakoo, and many others were added to our collection as we proceeded to the northward, although we never found the species common in any of the districts we visited. When *Lanius subcoronatus* appeared, *Lanius Collaris* ceased to be found, and we had every reason to believe that the former held, to the northward of Latakoo, that place which the latter holds to the southward. We were familiar with *L. subcoronatus* in its native haunts long before we were aware that it was an undescribed species. We had always conceived it to be identical with *Lanius Collaris*, and it was not till one of our hunters killed a specimen by accident that we were convinced of the contrary. When flying, as well as when perched, the similarity of the two species is striking, and their manners and habits are identically the same. Both pounce upon their prey with the same hawk-like spirit, and move through the air with equal velocity; both perch upon the summit of trees or shrubs, and there watch their prey or their enemies, and both impale what objects they capture, and are not able at the moment to consume, upon the long and powerful thorns of some favourite *acacia* tree. *L. subcoronatus* differs from *L. Collaris*, first, in having a smaller bill, the culmen of which is sharp, especially towards the frontal feathers; secondly, in having the frontal feathers and eyebrows white instead of black, as is the case in *L. Collaris*; it is also rather a smaller bird.



AMADINA ERYTHROCEPHALA .. A Male .. B Female

(After Plate 19)

AMADINA ERYTHROCEPHALA.—SMITH.

AVES.—PLATE LXIX.

A. suprà fusco-cinerea, infrà flavo-grisea rubro-tincta, et hic plumis ad apices fasciis nigro-brunneis et fasciis albis variegatis; abdomine subalbido rufo-tincto; capite gulâque in mare purpureo-coccineis; rectricibus, duabus mediis exceptis, ad apices albis.

LONGITUDO 5 unc. 6 lin.

LOXIA MACULOSA, *Burchell*.—Travels in South Africa, vol. ii. p. 269.

COLOUR.—*Male*.—The upper and lateral parts of the head, the nape and the chin vermilion-red,—the front, sides of the head, and chin, strongly tinted with arterial blood-red; the upper and lateral parts of the neck, the interscapulars, back, rump, and tail coverts brocoli-brown,—the two last-named lightest, tipped with dirty white, and more or less regularly barred with narrow lines of brownish-red. The throat and breast yellowish-grey, brightened with a slight admixture of hyacinth-red, and barred with deep liver-brown; the bars are narrow, those on the throat very faint and indistinct, those on the breast strongly marked and arched, the convexity being backwards. On the breast the space between the last two brown bars of each feather, one of which forms its tip, is orange-coloured white; the belly and flanks are dull hyacinth-red, barred and spotted with white like the breast; vent cream-yellow; the under tail coverts brocoli-brown, broadly tipped with cream-yellow, the colours separated by a narrow brown crescent. The lesser wing coverts and the primary and secondary quill coverts intermediate between brocoli-brown and yellowish-brown, several of the former, and all the latter broadly tipped with cream-yellow and narrowly barred, in front of the latter colour, with brown. The quill feathers are light brownish-red, tipped and margined, externally, with light wood-brown; the tail feathers the same colour, and, except the two middle ones, each has a large white blotch at the tip of its inner vane; the outer vane of the outermost tail feathers of each side is also white. Bill, dull yellowish-brown, the under mandible lightest and of a pink hue. Eyes, deep reddish brown. Legs, a light flesh colour.

FORM, &c.—Figure rather robust; head large, bill strong, short, and pointed; the commissure of the upper mandible is waved, and towards the

AMADINA ERYTHROCEPHALA.

base of the bill angular, that of the lower is inverted ; space between eye and angle of mouth nearly bare. Wings rounded and when folded cover the first half of the tail ; the first quill feather is rudimentary, the third is the longest, the second and fourth are equal and rather shorter than the third, the fifth, sixth, and seventh, are successively shorter,—the difference between each, as well as between the fifth and fourth, about a line and a half. Tail graduated, the two centre feathers considerably the longest, and also the most pointed. Legs short and moderately robust, anteriorly scutellated, posteriorly entire ; toes strong, the middle one much the longest, the external and internal ones nearly of equal length, the hinder toe short and powerful ; the claws short and slightly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	7
the tip of the tail.....	5	6	of the outer toe	0	3
Length of the bill.....	0	5	of the inner toe	0	3
of the wings when folded ...	2	11	of the middle toe.....	0	5½
of the tail.....	2	3	of the hinder toe.....	0	2½

Female.—With the exception of the head, the colours are like those of the male, only lighter, and not so vivid ; the head in the female is of the same colour as the back.

Young.—Colours similar to those of the female.

All the examples that we saw of this species occurred in the neighbourhood of Latakoo, and in the situations in which we discovered them we invariably found numbers congregated together. The individuals which composed the flocks were generally seen feeding upon the ground near to the gardens of the natives, and when they were disturbed, they, according to circumstances, either repaired to the hedges or shrubs in the immediate neighbourhood, or to some more distant locality. While feeding or flying, they uttered harsh chirping sounds, and on no occasion any thing like a musical note.



BUBO VIRGINIANUS
Aud. - Plate 70

BUBO CAPENSIS.—SMITH.

AVES.—PLATE LXX. (YOUNG.)

B. *suprà* brunnea maculis fasciisque subfulvis variegata ; *infra* brunnea fasciis subfulvis variegata ; remigibus, tectricibusque remigium brunneis pallide fulvo-variegatis ; remigibus secundariis externe, tectricibusque annulis subfulvis notatis ; caudâ brunneâ pallide aurantio-fasciatâ ; maculâ cervicali albâ ; oculis aurantiis.

LONGITUDO ab rostri apice ad caudæ extremitatem 22 unc. 8 lin.

COLOUR.—The upper parts umber-brown, variegated with spots and transverse bars of a dark buff orange tint;—the variegations are in the form of irregular spots upon the feathers of the head and shoulders, and of spots and bars upon the other feathers ; the bars are situated towards the base of the feathers, the spots towards the point, one generally on each vane, and these separated from each other by the intervention of a brown stripe which extends longitudinally between them ; many of the feathers are also tipped with yellowish white, or have an imperfect spot of that colour upon each vane close to the apex. The variegations on the head and shoulders are smaller and less profuse than on the other parts, and the ground colour is rather darker. The quill coverts and quill feathers are umber-brown, the outer vanes of the primary quill feathers varied with narrow, pale, buff bars, which are freckled with brown, the inner vanes with broad bars of the same colour, only of a darker and brighter tint, the bars of the vanes not directly opposed to each other. The outer vanes of the secondary quill feathers, both vanes of the tertiaries and the outer vanes of the larger, and both vanes of the lesser quill coverts, marked with somewhat circular buff rings, inclosing a spot of umber-brown ; the inner vanes of the secondary quill feathers and of the primary quill coverts barred with yellowish white or pale buff-orange. Tail feathers umber-brown barred with buff-orange, the bars of all the feathers, excepting those of the outermost one of each side, mottled with brown ; the bars excepted nearly pure white tinted with buff-orange near the shaft ; all the tail feathers tipped with pale buff orange. Under parts umber-brown variegated with bars and large subcircular spots varying in colour between white and buff orange, the last form of variegations is produced by the umber-brown extending along the course of the shafts, and connecting the dark bars situated towards the tips of the feathers. Under tail-coverts yellowish white with narrow brown bars, each with a point in the course of the shaft extending towards the tip of the feather. The feathers of the legs and toes ochrey yellow, those of the former freely variegated with small, arrow-shaped, umber-brown spots. Guttural spot white ; cervical collar umber-brown variegated with white spots ; facial disc yellowish brown pencilled with umber-brown ; the wiry feathers coating the bill white at the base,

BUBO CAPENSIS.

umber-brown at the points. Bill dark livid brown; claws a horn colour, lightest towards base. Eyes bright orange yellow.

FORM, &c.—Head moderately large; facial disc complete, cervical collar distinctly defined. Egrets nearly over and about an inch from the outer corners of the eyes, the feathers composing them narrow and pointed. Body bulky and densely covered with feathers and down. The wings, when folded, reach to within an inch and a half of the tip of the tail, the third quill feather in specimen the longest, the second and fourth equal and slightly shorter, the first about an inch shorter than the second. The secondaries about two-and-a-half inches shorter than the third primary quill feather. Tail slightly rounded. Claws long, strong, arched, and pointed. Bill compressed, curved from the base, and the upper mandible strongly hooked and pointed.

DIMENSIONS.

	In.	Lin.		In.	Lin.
Length from the point of the bill to			Length of the tarsus	3	3
the tip of the tail	22	8	outer toe.....	1	1
Length of the tail	9	0	middle toe	1	10
bill to the angle of the			inner toe	1	5
mouth	1	6	hinder toe	0	10
wings when folded	15	0			

Colouring, &c. of the other sex not known.

Levaillant asserts that *Strix Bubo* is a native of Southern Africa,* and I was disposed, when I first obtained the owl just described, to regard it as a young individual of that species. On being informed, however, by an able zoologist, who had seen an adult specimen, that it differed materially as regarded its marking from the European bird, I came to the resolution of viewing it as distinct, and concluded that Levaillant must, once at least, have fallen into an error. Since my return to England, I have endeavoured, but without success, to obtain for comparison a specimen of *Strix Bubo* of the same age as the bird here described. I shall therefore give the characters of one as drawn by Linnæus, and leave it to the reader to decide whether the differences between it and the Cape bird are not greater than are commonly found to exist between two individuals of one species whose ages are to be inferred as nearly the same. He says, “the wings were dark, with reddish-brown spots; feathers of the breast brick-red, with a dark indented longitudinal stripe; tail feathers still short, dark with roundish red spots; feet reddish brown.”†

Few specimens of this species have yet been procured, and none, as far as I know, at any great distance from Cape Town. According to the statements of the Dutch settlers and the Hottentots, single specimens are occasionally seen perched upon the tops of trees both about day-light and dusk; but from their being so vigilant and wary, they can rarely be approached so closely as to be shot. They are said to feed upon moles, rats, mice, and small birds.

* Oiseaux d'Afrique, tom. i. page 160. pl. 40. † Yarrell's British Birds, vol. i. p. 110.



ATHENE WOODHOOP
(Aves - FIG. 11)

ATHENE WOODFORDI.—SMITH.

AVES.—PLATE LXXI.

A. suprâ rubro-brunneus, maculis fasciisque albis notatus, infrâ pallide rubro-brunneus fasciis albis variegatus; caudâ rubro-brunnâ septem octove fasciis pallide flavo-brunneis; rostro pedibusque flavis; oculis aurantiis; unguibus livido-brunneis.

LONGITUDO ab apice rostri ad caudæ extremitatem 13 unc. 6 lin.

NOCTUA WOODFORDI, *Smith*, South African Quarterly Journal.

COLOUR.—The top of the head, the upper and lateral parts of the neck and the tail intermediate between umber and reddish brown; the body above rich reddish brown: the feathers of the head, neck, back, and tail coverts variegated with white spots and with white and sienna-coloured bars; generally only one white spot exists on each feather, which is situated towards the apex, is of an irregular arrow-shape, and varies in size upon the different parts of the body, being generally largest on the interscapulars and tail coverts. The white or sienna-yellow bars are situated nearer to the quills than the white spots, and are generally margined with brown of a deeper shade than the ground colour; these dark margins are less distinct upon the feathers of the head and neck than upon those of the back, &c. On the head and neck there is, in general, only one bar to each feather, while on the feathers of the other parts there are commonly two or three. Lesser quill coverts of a colour intermediate between those of the head and back, and they are variegated with a few white short lines or ochrey coloured spots. Primary quill coverts yellowish brown, lightest towards the tips, which are faintly barred with brown of a darker tint. Secondary quill coverts yellowish brown, variegated with narrow, irregular, dark brown bars, and large white or yellowish white blotches; the tips of all white. Quill feathers barred brown and yellowish brown, the brown bars of the outer vanes not directly opposite those of the inner vanes; some of the inner tertiaries yellowish brown barred with brown. The feathers on the outer side of the eye dark reddish brown, those coating the sides of the bill white at the base, umber-brown at the points. Cervical collar white, the feathers crossed with several narrow brown bars. The colour of the breast and belly, as the feathers lie smooth upon the bird, appears to be pale reddish brown and white in alternate bars,

ATHENE WOODFORDI.

but when a single feather is examined, white is found to be the predominant colour, while the pale reddish exists only as a broad bar at the tip of each feather: behind the tips the feathers are crossed by several narrow umber-brown lines; sides of abdomen and vent partly white and partly pale buff-orange, the feathers being crossed by several narrow umber-brown bars. Legs and tarsi sienna-yellow, variegated with short umber-brown bars. Tail dull reddish brown, with seven or eight pale yellowish brown bars, the last bar forming the tip of each feather. Bill deep straw-yellow, greenish at the point. Eyes a deep and bright yellow. Toes dull yellow; claws wood-brown at base, elsewhere livid umber-brown.

FORM, &c.—Head rather small; facial disc distinct; cervical collar moderately developed and continuous, its feathers decomposed; the feathers coating the sides of the bill long and wiry. The wings, when folded, reach some distance beyond the commencement of the last third of the tail; the fourth quill-feather the longest, the third slightly shorter, the second and fifth equal and shorter than the third, the first rather shorter than the second. The tip of the tail slightly rounded. Bill compressed towards tip and strongly hooked; nostrils large, open, and nearly circular. Tarsi covered with soft downy feathers; toes coated with small, somewhat granular scales; claws slender, moderately long, much arched. and pointed.

DIMENSIONS.

	In. Lin.		In. Lin.
Length from the point of the bill to the tip of the tail	13 6	Length of the tarsi	1 9
Length of the bill to the angle of the mouth.....	1 1½	outer toe	0 7
wings when folded.....	9 0	middle toe	0 10½
tail	6 0	inner toe	0 9½
		hinder toe	0 3

The markings of the *male* are nearly the same in form as those of the *female*, but the colours are rather brighter.

This owl occurs in various parts of the colony, and is generally discovered about the outskirts of forests. It is by no means a common bird in South Africa, and specimens of it are but rarely procured. It feeds upon small quadrupeds, birds, large insects, &c.



1 DRYMOICA CAESIA
2 DRYMOICA PALLIDA

(Aves —Plate 72.)

DRYMOICA SUBSTRIATA.—SMITH.*

AVES.—PLATE LXXII.—FIG. 1. (FEMALE.)

D. suprâ flavo-brunnea colore rubiginosâ tincta; infrâ ochraceo-alba; pectore striis brunneis variegato; remigibus brunneo-rubris pallide griseo-brunneo-marginatis; rectricibus griseo-brunneis colore rubiginosâ lavatis; rostro colore corneo; tarsis, pedibus, unguibusque rubri-flavis.

LONGITUDO e rostri apice ad basin caudæ 2 unc. 8 lin.; caudæ 3 unc.

COLOUR.—The top of the head, the sides of the neck and the shoulders light broccoli-brown; the back of the head, the upper parts of the neck, the interscapulars, back, and tail coverts a uniform rusty yellowish brown. Sides of head and ear-coverts pale wood-brown, the latter faintly streaked with dull umber-brown; eyebrows white, prolonged behind the eyes. Chin, throat, centre of breast, and belly, ochrey white, the breast variegated with several narrow, longitudinal, umber-brown stripes, one along the centre of each feather; flanks and vent light yellowish brown. Primary and secondary quill coverts, and the quill feathers, pale brownish red, faintly margined with wood-brown; some of the inner secondaries and the tertiaries broadly margined with yellowish brown. Tail a rusty broccoli-brown, the middle feathers darkest. Bill a dark horn-colour; legs, toes, and claws pale buff-orange, the latter brown at the points.

FORM, &c.—Figure slender and lengthened. Bill slender and nearly straight, the culmen slightly arched, particularly towards the point; it is triangular at the base, and compressed towards the tip: nostrils small,

* Having carefully compared all the species of this genus which I possess, with the species described and represented by Levaillant, (*Oiseaux d'Afrique*,) I am not able to satisfy myself of the identity of more than one of mine, the "*Pinc Pinc*," plate 131; hence I have preferred figuring all the species which I possess, rather than incur the risk of including two species under one name. The species I have figured as *Drymoica ruficapilla* is, I suspect, identical with *Le Rousse Tete*, Levaillant, plate 124, but the rest I am disposed to regard as specifically different from any described by him. I am sometimes disposed to believe that the renowned traveller, whom no one can respect and honour more than I do, has occasionally, from accident, probably through an intermixture of specimens, considered birds as natives of South Africa which belong to other countries; and it is only by presuming such to have happened, that I can account for my never having been able to procure or hear of various species which Levaillant affirms are found in it.

DRYMOICA SUBSTRIATA.

situated in a concavity near the base of the upper mandible, and above membranous. Wings rounded, and when folded reach beyond the first third of the tail; the fourth, fifth, sixth, seventh, and eighth, quill feathers nearly equal and longest, the third rather shorter, the second considerably shorter than the third, and the first rather more than half the length of the second; the secondary and tertiary quill feathers nearly as long as the primaries. Tail long and much graduated, the feathers slightly decomposed, the two middle ones longest. Tarsi robust, anteriorly scutellated, posteriorly entire; toes long and slender, the outer and middle ones united near the base, the hinder toe longest; claws rather short, slender, and slightly curved, the claw of the hinder toe longest.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	10½
the tip of the tail	5	8	of the outer toe	0	3¼
of the bill to the angle of the			of the middle toe	0	5
mouth	0	7	of the inner toe	0	3½
of the wings when folded ...	2	1½	of the hinder toe	0	2
of the tail	3	0			

MALE.—The *male* is not known to me.

So far as my experience goes this is a rare bird in Southern Africa, and the only individuals which I have met were on the banks of the Oliphant's River, about one hundred miles to the north of Cape Town. It is generally found in thickets composed of high brushwood or dwarf trees, in which it is seen flitting rapidly from branch to branch, apparently in quest of insects, which constitute its food. When so employed it carries its tail rather above the line of the back, and when it fancies it is perceived it generally remains tranquil for a time; but as soon as all danger is supposed to be past, from no act of aggression being committed by the individual who intrudes upon its retreat, it again betakes itself to search for food, and so continues till it disappears in some distant part of the thicket.

DRYMOICA PALLIDA.—SMITH.

AVES.—PLATE LXXII. FIG. 2.

D. suprâ pallide griseo-brunnea, flavo-brunneo lavata; gulâ, gutture, pectoreque sordide albis; abdomine subflavo; remigibus sordide griseo-brunneis, externe flavo-brunneo marginatis; rostro colore corneo; pedibus flavis; oculis

LONGITUDO e rostri apice ad basin caudæ 2 unc. 7 lin.; caudæ 3 unc. 4 lin.

COLOUR.—Upper parts pale broccoli-brown, lightly washed with yellowish brown, the head and upper parts of the neck lightest, the tail darkest; ear coverts rusty white; chin, throat, and breast white, faintly tinged with wood-brown; belly and vent pale sienna-yellow. Bill a dark horn colour. Legs and toes a clear buff-orange.

FORM, &c.—Figure slender; the tail long and much graduated. Bill moderately strong, nearly straight, and compressed towards the point; culmen near the tip considerably arched. Wings rounded, and when folded reach about an inch beyond the base of the tail; the third, fourth, fifth, and sixth quill feathers nearly equal and longest; the seventh rather shorter; the second and eighth nearly of equal length and rather shorter than the seventh; the first about half the length of the longest quill feather;—all the feathers silky and slightly decomposed. Tarsi moderately strong, anteriorly scutellated, posteriorly entire; toes rather short and strong, the outer one united to the middle one near the base; claws slender, curved, and pointed, the one arming the hinder toe longest and most curved.

DRYMOICA PALLIDA.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	0
the tip of the tail	5	11	of the outer toe	0	3
of the bill to the angle of the			of the middle toe	0	4½
mouth	0	7	of the inner toe	0	3
of the wings when folded . .	2	1½	of the hinder toe	0	3
of the tail	3	4			

FEMALE.—Unknown.

This species is but rarely obtained, and the only specimens I possess were procured about three hundred miles to the north of Cape Town, in the Namaqua country. It occasionally occurs in thickets, but more generally upon dwarf trees, in the vicinity of streams, and through these it passes rapidly from branch to branch in pursuit of insects, which form its chief food.



1 DREMORA RUFICAPILLA.
 2 DREMORA LEVAILLANTII
 (See Plate 13)

DRYMOICA RUFICAPILLA.

AVES.—PLATE LXXIII. FIG. 1. (MALE.)

D. capite cerviceque superne pallide castaneis; interscapuliis, dorso, caudâque brunneis flavo-brunneo lavatis; remigibus pallide brunneo-rubris pallide flavo-brunneo-marginatis; gulâ, gutture, pectoris ventrisque medio pallide stramineis; capitis, cervicis, pectoris ventrisque lateribus pallide griseo-brunneis; rostro flavo-brunneo; pedibus rubri-flavis; oculis rubri-aurantiis.

LONGITUDO e rostri apice ad basin caudæ 2 unc. 6 lin.; caudæ 1 unc. 11 lin.

LE ROUSSE TETE, *Lerail.* Ois. d'Afrique, pl. 124.?

COLOUR.—Top of the head and upper parts of the neck pale chesnut-brown, the latter lightest; interscapulars, back, and tail coverts pale broccoli-brown washed with yellowish brown; tail the same colour, but brighter and the feathers margined with light yellowish brown of a dull hue. Lesser quill coverts light brownish red, broadly margined and tipped with pale broccoli-brown. Primary and secondary quill coverts, and primary and secondary quill feathers pale brownish red, margined more or less broadly with pale yellowish brown, a few of the secondaries and the tertiary feathers edged with pale chesnut-brown. Chin, throat, centre of breast and belly, pale straw-yellow; sides of head, neck, breast, belly, and vent, pale greyish brown. Bill yellowish brown, the upper mandible shaded with umber-brown; legs and toes pale buff-orange; claws a pale horn colour. Eyes bright reddish orange.

FORM, &c.—Figure slender, tail rather short and slightly graduated. Bill nearly straight, and rather slender, towards point compressed, towards base triangular; wings rounded, and when folded reach over the first fourth of the tail; the third, fourth, fifth, sixth, and seventh quill feathers nearly equal and longest; the second considerably shorter, and the first narrow and about half the length of the second; the tertiaries as long as the primary quill feathers. Tarsi rather strong, anteriorly scutellated, posteriorly entire;

DRYMOICA RUFICAPILLA.

toes short and strong; claws slender, curved, and pointed, the claw of the hinder toe longest and strongest.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	10 $\frac{1}{2}$
the tip of the tail	4	5	of the inner toe	0	3
of the bill to the angle of the			of the middle toe	0	4 $\frac{1}{2}$
mouth	0	6 $\frac{1}{4}$	of the outer toe	0	3
of the wings when folded. . .	2	1 $\frac{1}{2}$	of the hinder toe	0	2 $\frac{3}{4}$
of the tail	1	11			

FEMALE.—Head the same colour as the back; in other respects the colours of the two sexes are the same.

This bird occurs in various situations in the interior of the Cape Colony, and is usually found among brushwood or upon dwarf trees. It feeds upon small insects, and in quest of those it is to be seen flitting from branch to branch with great rapidity. As compared with many of the other species, it may be considered as rather a rare bird, and it rarely happens that more than one or two specimens are procured in any given locality which it is known to inhabit.

DRYMOICA LEVAILLANTII.—SMITH.

AVEC.—PLATE LXXIII.—FIG. 2. (MALE.)

D. capite cerviceque superne pallide castaneis, brunneo-strigatis; interscapulis dorsoque profunde brunneis, pinnis flavo-brunneo marginatis; rectricibus brunneo-rubris pallide castaneo-marginatis; partibus inferioribus pallide flavo-brunneis; rectricibus brunneis externe castaneo-marginatis, plumarum apicibus pallide flavo-brunneis; rostro livido-brunneo; pedibus rubri-flavis; oculis castaneis.

LONGITUDO e rostri apice ad basin caudæ 2 unc. 5 lin.; caudæ 2 unc. 8 lin.

COLOUR.—The upper parts of the head, and the upper and lateral parts of the neck, bright chesnut-brown, the two first variegated with umber-brown stripes, one along the centre of each feather; interscapulars, back, and tail coverts liver-brown, each feather edged on both sides with pale wood-brown; lesser wing coverts umber-brown, broadly edged and tipped with pale broccoli-brown. Primary and secondary quill coverts, and the tertiary quill feathers, liver-brown, and distinctly edged externally with pale wood-brown; primary and secondary quill feathers light brownish red, edged with chesnut-brown. Under parts pale wood-brown, the throat lightest, and inclined to white. Tail feathers light umber-brown, margined externally with pale chesnut-brown, and broadly tipped with dull wood-brown; behind the light points each feather is marked with a circumscribed liver-brown blotch, which is much darker than the general colour of the feather, and is most readily seen on the under surface of the tail. Eyebrows and sides of the head wood-brown. Bill horn-coloured, the lower mandible lightest; legs and toes pale buff-orange; claws horn-coloured. Eyes deep chesnut-brown.

FORM, &c.—Figure rather robust; tail moderately long and graduated; bill slightly curved, triangular at the base, compressed towards the point, culmen considerably arched, wings rounded, and when folded reach over the first third of the tail; the third, fourth, fifth, and sixth nearly equal and longest, the second rather shorter, and nearly equal in length to the secondary quill feathers; the first about half the length of the third, and very narrow. Tarsi robust, anteriorly scutellated, posteriorly entire; toes rather

DRYMOICA LEVAILLANTII.

long, and moderately strong ; claws slender, and slightly curved, the claw of the hinder toe strong, long, and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus ..	0	9
the tip of the tail	5	1	of the outer toe	0	$3\frac{1}{4}$
of the bill to the angle of the			of the middle toe	0	$5\frac{3}{4}$
mouth	0	$6\frac{1}{4}$	of the inner toe	0	$4\frac{1}{4}$
of the wings when folded ...	2	3	of the hinder toe.....	0	$3\frac{1}{2}$
of the tail	2	8			

FEMALE.—The colours the same as those of the *male*, only not so deep.

This species is rather widely distributed over South Africa. In the vicinity of Cape Town it is not an uncommon bird, nor is it rare for at least some distance to the north of the Orange River. It resorts both to underwood and long grass, especially in situations where the latter is closely set and strong ; and it is found perhaps more frequently than any where else among rushes or slender reeds in the neighbourhood of marshes, or upon the edges of streams. Its food consists of insects, and in quest of these it flits quickly from spot to spot. Of the species of this genus it is one of the least wild, and specimens are easily obtained when its resorts are once discovered. Any unusual noise or appearance readily engages its attention, and leads it to ascend to the top or outside of the material upon which it may happen to be perched, in which position it is readily shot. It exhibits a slight peculiarity in respect of the length of the toes : in most of the species of *Drymoica* the outer and inner toes are nearly of equal length ; in this one, however, the inner toe is nearly as long as the middle toe, and palpably longer than the outer one.



1 DRYMOICA TEXTRIX.
2 DRYMOICA TERRESTRIS
(Aves. Plate 74)

DRYMOICA TEXTRIX.

AVES.—PLATE LXXIV. FIG. 1.--(MALE.)

D. *suprà sordide brunnea, plumis albo aut flavo-brunneo marginatis ; infrà sordide alba, pectore ventrequè striis brunneis variegatis ; caudâ brunneâ, rectricibus tribus externis lateris utriusque albo-terminatis ; rostro pedibusque rubri-flavis.*

LONGITUDO e rostri apice ad basin caudæ 2 unc. 11 lin. ; caudæ 1 unc. 1 lin.

LE PING PING, Levaill. Ois. d'Afrique, pl. 131.

COLOUR.—The upper parts of the head and neck, together with the interscapulars, back and shoulders, umber-brown, variegated with white and clear yellowish brown ; the colours constituting the variegations occur at the edges and tips of the feathers, which are either of the one or other of the light tints ; in the feathers of the back they are mostly yellowish brown. The sides of the head and neck dirty yellowish brown, mottled with small umber-brown blotches. The primary and secondary quill-coverts umber-brown edged and tipped with pale wood-brown ; primary and secondary quill-feathers brownish red, the former edged, faintly, with pale wood-brown, the latter rather broadly with dirty greyish white. Chin and throat dirty greyish white, indistinctly mottled with light umber-brown ; breast and anterior portion of belly pale sienna-yellow distinctly mottled with oblong umber-brown spots nearly disposed in rows, middle and hinder portions of belly blueish white ; flanks and vent pale yellowish brown, the former variegated with longitudinal umber-brown stripes. The two centre tail feathers brownish red, the rest umber-brown, the whole edged with wood-brown, and the three outermost ones of each side broadly tipped with white. Bill, legs, and toes pale buff-orange, the upper mandible deepened from a shade of brown ; claws the same colour, rather brownish at the tips. Eyes reddish brown.

FORM, &c.—Figure rather robust. Bill short, rather robust towards base, slender and compressed towards point ; it is slightly curved, and the arch of the culmen anteriorly is considerable. Wings rounded, and when folded cover nearly the first half of the tail ; the third, fourth, fifth and sixth quill feathers nearly equal and longest, the second and seventh rather shorter, the first rudimentary and narrow ; the two innermost secondaries, and some of the tertiaries nearly equal in length to the primary quill feathers. Tail very

DRYMOICA TEXTRIX.

short and slightly graduated. Tarsi robust, anteriorly scutellated, posteriorly entire; toes slender and rather long, the outer and middle ones united towards base; claws long, slender, and slightly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	11 $\frac{1}{2}$
the tip of the tail	4	0	inner toe	0	3 $\frac{1}{2}$
of the bill to the angle of the			middle toe	0	5
mouth.....	0	6	outer toe ..	0	3 $\frac{1}{4}$
of the wings when folded	1	10 $\frac{1}{2}$	hinder toe.....	0	3
of the tail	1	1			

Female.—Colours and proportions nearly the same as those of the *male*.

Although this bird, the "*Pinc Pinc*" of Levaillant,* is well represented in the splendid work of that traveller, yet I have thought it desirable to reproduce it here, to enable persons not possessed of the work referred to, and which is not generally available to naturalists in England, to compare it with the other South African species. It has been made the type of a form by Mr. Swainson;† but as I cannot regard it otherwise than as a *Drymoica*, with modifications, suiting it for seeking its food upon the ground, I have not entitled it *Hemipteryx*. The *Pinc Pinc* occurs in various situations in the Cape Colony, but is never found, as far as I know, to the north of the Orange River. It occurs in districts abounding with long grass, and seeks its food, which consists of insects, upon the ground in places so circumstanced. It rarely perches, and when it does, it is in localities where small shrubs exist. Where neither shrubs nor grass sufficiently strong to support it exist, it is only to be shot while on the wing; and when it has been once or twice put to flight, it afterwards conceals itself, and cannot again be flushed even by the greatest exertion.

* Oiseaux d'Afrique, plate 131.

† Lardner's Cyclopædia. (Natural History. Birds, vol. ii. page 242.)

DRYMOICA TERRESTRIS.—SMITH.

AVES.—PLATE LXXIV. FIG. 2. (MALE.)

D. capite suprâ interseapulisque sordide brunneis, flavo-brunneo marginatis; cervice superne dorsoque pallide flavo-brunneis parce sordide brunneo-maculatis; remigibus griseo-brunneis, marginibus pallidioribus; gulâ guttureque flavo-albis; pectore ventreque subflavis; rectricibus albo-terminatis; rostro pedibusque pallide rubri-flavis.

LONGITUDO e rostri apice ad basin caudæ 2 unc. $7\frac{1}{2}$ lin. caudæ 1 unc. 9 lin.

COLOUR.—Top of the head and interscapulars umber-brown, variegated with yellowish brown, from all the feathers being edged and tipped with the latter colour; the back of the neck, the back and the shoulders clear yellowish brown dashed with longitudinal umber-brown streaks, one streak along the middle of each feather—the variegations few and indistinct on the back. Tail coverts umber-brown, margined and tipped with yellowish brown. The sides of the head and neck pale yellowish brown, the latter behind fading into white. Primary and secondary quill coverts umber-brown along their centre, wood-brown at edges and tips. Primary and secondary quill feathers broccoli-brown, narrowly margined externally with dull wood-brown; tertiary quill feathers umber-brown, broadly margined and tipped with yellowish brown. Chin and throat yellowish white; breast, belly, vent, and feathers of legs sienna-yellow, the tint of the flanks darkest. The two middle tail feathers broccoli-brown, broadly margined and tipped with wood-brown, the rest of the feathers brownish red, faintly edged externally with wood-brown and broadly tipped with white; immediately behind the white tip there is a large blotch of umber-brown seen most distinctly on viewing the under surface of the feathers. Bill, legs, and toes pale buff-orange, the upper mandible deepened from a shade of brown; claws yellowish brown, darkest at the points. Eyes reddish brown.

FORM, &c.—Figure slender, bill moderately strong, triangular at base, compressed towards point, slightly curved, the curvature of the culmen considerable towards the point of the bill; nostrils small, situated in a depression towards base, and edged above with membrane. Wings rounded, and when folded reach a little beyond the base of the tail; the third, fourth,

DRYMOICA TERRESTRIS.

fifth, and sixth quill feathers nearly equal and longest, the second and seventh rather shorter, the first about half as long as the second, and narrow; the tertiary nearly as long as the primary quill-feathers. Tail moderately long, and slightly graduated, the two middle feathers rather the longest. Tarsi moderately strong, anteriorly scutellated, posteriorly entire; toes long and moderately strong, the outer and middle ones united near their base; claws slightly curved, the claw of the hinder toe longest.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	10
the tip of the tail	4	4½	of the outer toe	0	3
of the bill to the angle of the			of the middle toe	0	4½
mouth	0	6	of the inner toe	0	3
of the wings when folded . .	2	1	of the hinder toe	0	3
of the tail	1	9			

FEMALE.—The colours are rather brighter and the proportion of umber-brown on the back is rather less than in the male. The bill is more delicate and shorter.

This bird was first discovered upon the grassy plains lying between Latakoo and Kurrichane, and was found, though sparingly, to the northward of the latter. It feeds on the ground, always in situations fully supplied with long grass, and seems to hold an analogous place in the districts it inhabits to that which *Drymoica tetrica* holds in the more southern latitudes. From its generally occurring in situations where few if any shrubs exist, it is not very easy to procure specimens, as nothing occurs for the bird to perch upon; hence the only chance of killing it is by firing at it while on the wing. When an individual is discovered, it may be flushed a second, and perhaps a third time, but after that any further attempts to disturb it prove fruitless. It feeds upon minute insects.



1. DRYMOICA PECTORALIS.
2. DRYMOICA PECTORALIS
(Aves.—Plate 75)

DRYMOICA OCULARIUS.—SMITH.

AVES.—PLATE LXXV. FIG. 1. (MALE.)

D. superne brunnea, flavo-brunneo-variegatas; capitis lateribus badiis; partibus inferioribus albis, pectore fasciâ angustâ nigro-brunneâ notato; rostro castaneo, brunneo-umbrato; oculis rubro-aurantiis; pedibus rubro-flavis.

LONGITUDO e rostri apice ad basin caudæ 2 unc. 5 lin.; caudæ 2 unc. 10 lin.

COLOUR.—The top of the head, the back and sides of the neck, the interscapulars, back, and lesser wing-coverts umber-brown striped with yellowish brown, the latter being the colour of the edges and tip of each feather. Tail feathers, excepting the two middle ones, umber-brown, the outer vane of the two outermost of each side and the margin of the outer vane of the third yellowish brown; the two middle feathers broccoli-brown, tinted with yellowish brown. The sides of the head and ear-coverts intermediate between reddish orange and hyacinth-red; the chin and throat white; breast, anteriorly, crossed by a narrow liver-brown bar, posteriorly dirty white tinted with broccoli-brown, which is also the colour of the belly, thighs, and vent, the tinting colour most distinct on the sides of the breast, flanks, and thighs. Primary and secondary quill feathers light brownish red and margined, externally, toward quills with wood-brown; tertiary quill feathers umber-brown, edged and tipped with wood-brown. Bill deep chesnut-brown, shaded with umber-brown. Eyes pale reddish orange. Feet pale reddish yellow; claws a light horn-colour.

FORM, &c.—Figure slender; tail long and much graduated. Bill slender, pointed, slightly curved, and rather broad at its base; wings rounded and when folded reach as far as the commencement of the second fourth of the tail, the third, fourth, and fifth quill feathers equal and longest, the sixth and seventh slightly shorter, the second and eighth nearly equal, and a little shorter than the seventh, the first rather more than half the length of the third. Tarsi rather robust, scutellated anteriorly, entire posteriorly; toes slender;

DRYMOICA OCULARIUS.

claws delicate, pointed, and considerably curved, the claw of hinder toe strongest.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	0
the tip of the tail	5	3	of the outer toe	0	3
of the bill to the angle of the			of the middle toe	0	5 $\frac{1}{4}$
mouth	0	6 $\frac{1}{2}$	of the inner toe	0	3
of the wings when folded . .	2	0	of the hinder toe	0	2 $\frac{1}{2}$
of the tail	2	10			

FEMALE.—The colours generally not so deep as those of the *male*, and the white of the breast and belly is more pure; in other respects the sexes are like in general appearance.

This bird has rather an extensive range in South Africa, being found, though sparingly, among brushwood in the northern districts of the Cape Colony, and between those districts and the tropic of Capricorn. It feeds upon insects, and, in quest of them, it is to be seen flitting from branch to branch in the most arid and barren situations.

DRYMOICA PECTORALIS.—SMITH.

AVES. — PLATE LXXV. FIG. 2. (MALE.)

D. superne pallidè cinereo-brunnea; gulâ guttureque albis; pectore ventrequè pallido-flavis, pectore fasciâ profunde brunneâ notato; rectricibus versus apicem fasciâ brunneâ maculatis; rostro purpureo-brunneo; pedibus flavo-aurantiis.

LONGITUDO e rostri apicè ad basin caudæ 2 unc. 5 lin.; caudæ 2 unc. 7 lin.

COLOUR.—Top of the head, ear-coverts, back of the neck, interscapular feathers, and back a colour intermediate between broccoli and wood-brown. The lesser wing-coverts, and the primary and secondary quill-coverts reddish brown faintly edged with wood-brown; quill feathers light brownish red, the outer vanes narrowly edged with wood-brown. Tail feathers wood-brown, the tips lightest, and immediately behind the light shade a faint dark line, as if each was crossed by a narrow dusky bar, the two middle feathers without either the dark bars or the light tips. Chin, upper portion of throat, and sides of neck dirty white; lower portion of throat and sides of neck umber-brown, in the form of a broad transverse band. Eyebrows slightly white. The sides of the breast light umber-brown, the flanks a light and dusky hair-brown; middle of breast, belly, vent, thighs, and under tail-coverts straw-yellow. Bill liver-brown; tarsi and toes pale buff-orange; claws horn-coloured. Eyes ochrey yellow.

FORM, &c.—Figure slender; tail long and much graduated. Bill slender-pointed and slightly curved, rather broad at base, and the culmen prominent between the nasal fossæ. Wings rounded, and when folded, reach rather beyond the first third of the tail, the fourth, fifth, and sixth quill feathers equal and longest, the third and seventh rather shorter, the second, eighth, and ninth equal and rather shorter than the third, the first considerably shorter than the second. Tarsi and toes moderately robust, the former scutellated

DRYMOICA PECTORALIS.

anteriorly, entire posteriorly; claws moderately strong, compressed, curved, and pointed, the claw of hinder toe longest.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus ..	0	11½
the tip of the tail	5	0	of the outer toe	0	3
of the bill to the angle of the			of the middle toe	0	4
mouth	0	6	of the inner toe	0	3
of the wings when folded ...	2	1	of the hinder toe.....	0	2¼
of the tail	2	7			

FEMALE.—The colours generally the same as those of the *male*, only duller. The young bird is without the pectoral bar.

Inhabits dry situations abounding in brushwood, and was found principally at and around Latakoo. It feeds upon insects, which it procures upon the shrubs and dwarf trees which it frequents.



1. DRYMOICA CAFFENSIS
 2. DRYMOICA SUBRUFICAPILLA
 ALPH. FLY. 71

DRYMOICA CAPENSIS.—SMITH.

AVES.—PLATE LXXVI.—FIG. 1. (MALE.)

D. *suprà cinereo-viridi-flava, infra alba flavo-tincta; gutture, pectoreque maculis brunneis subovatis variegatis; remigibus brunneis externe cinereo-flavo-marginatis; rectricibus, duabus mediis exceptis, albo-terminatis et post maculas albas fasciâ nigro-brunneâ notatis; superciliis subalbis; rostro rubro-brunneo; pedibus rubro-flavis.*

LONGITUDO ab apice rostri ad caudæ basin 2 unc. 5 lin.; caudæ 2 unc. 6 lin.

COLOUR.—The upper surface of the head, the back and side of the neck, the interscapulars, the back, the tail coverts, and the tail feathers intermediate, between broccoli and yellowish brown; the points of all the tail feathers excepting those of the two middle ones narrowly margined with wood-brown. The primary and secondary quill coverts, and the primary and secondary quill feathers, dull umber-brown; the secondary quill coverts and all the quill feathers narrowly edged, externally, with deep wood-brown; the edges of wings, anteriorly, white. The chin, throat, and under parts of body white, with a yellowish tinge, amounting at the centre of the belly almost to a straw-yellow and all the under parts, excepting the middle of the belly and the flanks, are variegated with short, subovate, umber-brown stripes, disposed nearly in longitudinal rows; the flanks are a uniform dull hair-brown. Eyebrows slightly white. Bill rich chesnut-brown, shaded with dull liver-brown; feet pale reddish yellow.

FORM, &c.—Figure moderately robust. Bill slender, slightly curved and pointed, rather broad at the base. Tail rather lengthened and rounded or slightly graduated. Wings rounded, and when folded reach to the second fourth of the tail, the fourth and fifth quill feathers rather the longest, the third and sixth slightly shorter, the second considerably shorter than the third, and the first rather more than half the length of the fourth; the secondary and tertiary quill feathers considerably shorter than the primary

DRYMOICA CAPENSIS.

quill feathers. Tarsi robust, scutellated anteriorly, entire behind: toes long and moderately strong; claws slender, pointed and much curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines
Length from the point of the bill to			Length of the tarsus	1	0
the tip of the tail	4	11	of the outer toe	0	$3\frac{3}{4}$
of the bill to the angle of the			of the middle toe	0	$4\frac{1}{2}$
mouth	0	$6\frac{1}{2}$	of the inner toe	0	$3\frac{1}{4}$
of the wings when folded . .	2	1	of the hinder toe	0	3
of the tail	2	6			

FEMALE.—Not known.

Inhabits various districts in the western division of the Cape Colony, and is found in situations which abound with shrubs. It feeds upon insects, and searches for those both upon underwood and on the ground, generally, however, on the former. It is also occasionally observed among coarse grass or reeds, busily engaged climbing or flitting about in quest of food.

DRYMOICA SUBRUFICAPILLA.—SMITH.

AVES.—PLATE LXXVI. FIG. 2. (FEMALE.)

D. capite cerviceque supra castaneis brunneo-striatis; dorso pallide brunneo, subcinereo-variegato; partibus inferioribus flavo-cinereis, pectore leviter brunneo-notato; rectricibus versus apicem brunneo-fasciatis; rostro castaneo profunde brunneo-umbrato; tarsis rubro-brunneis; pedibus flavo-brunneis.

LONGITUDO e rostri apice ad basin caudæ 3 unc. 1 lin; caudæ 2 unc. 3 lin.

COLOUR.—The upper parts of the head and the back, and the sides of the neck near to the head, light chesnut-brown, striped with umber-brown along the centre of each feather; the lower parts of the back and the sides of the neck, the interscapulars, the lesser wing-coverts, and the back umber-brown, variegated with a colour intermediate between ash-grey and broccoli-brown, each feather being so broadly edged and tipped with the latter as even to constitute it the predominant colour. Tail dull reddish brown, all the feathers tipped with wood-brown, the two centre ones very faintly, and all the others have, each, a broad transverse umber-brown bar immediately behind the light tip. The primary and secondary wing-coverts umber-brown, margined externally, and tipped with pale wood-brown; the primary, secondary, and tertiary quill feathers intermediate, between brownish red and umber-brown, the tertiaries darkest,—the primary and secondary feathers towards the quills narrowly margined with light chesnut-brown; the tertiaries are edged and tipped with wood-brown. Chin, throat, middle of breast and belly pale yellowish grey, passing in some places into white, the breast faintly freckled with pale brown; sides of breast, flanks, vent, and under tail-coverts pale hair-brown. Bill chesnut-brown, shaded with umber-brown, the lower mandible, towards its base, yellowish brown. Tarsi pale reddish brown, passing towards toes into yellowish brown; claws yellowish brown, tinted with light reddish brown.

FORM, &c.—Figure rather robust. Bill slender, slightly arched and pointed; tail graduated, and in some specimens is much longer than in the one

DRYMOICA SUBRUFICAPILLA.

figured. Wings rounded, and when folded reach nearly to the commencement of the second third of the tail, the third, fourth, and fifth quill feathers equal and longest, the second and sixth a little shorter, the first about half the length of the longest. Tarsi rather robust, scutellated anteriorly, entire posteriorly; toes rather long and slender; claws rather delicate, slightly curved and pointed, the claw of hinder toe the strongest.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	9
the tip of the tail	5	4	of the outer toe	0	$3\frac{1}{4}$
of the bill to the angle of the			of the middle toe	0	$4\frac{1}{2}$
mouth	0	$6\frac{1}{2}$	of the inner toe	0	3
of the wings when folded . .	2	0	of the hinder toe	0	3
of the tail	2	3			

MALE.—Not known.

This bird occurs in various districts of the Cape Colony, and is either found upon brushwood or among rushes or reeds. It feeds upon insects, and, like others of the genus, flits generally from branch to branch or from reed to reed in quest of its food.



1. ERYMOICA AFFINIS
 2. ERYMOICA CHERITHA
 (WILL. ELEGANT)

DRYMOICA AFFINIS.—SMITH.

AVES.—PLATE LXXVII. FIG. 1. (FEMALE.)

D. capite cerviceque superne griseo-brunneis ; interscapulis dorsoque griseo-brunneis, flavo brunneo-tinctis ; partibus inferioribus flavo-albis ; abdominis lateribus tectricibusque caudæ inferioribus ochraceis ; remigibus rubro-brunneis externe flavo brunneo-marginatis ; rectricibus pallide rubro-brunneis albo-terminatis et versus apicem nigro-brunneo-fasciatis ; rostro brunneo versus basin mandibulæ flavo-brunneo ; pedibus rubro-flavis.

LONGITUDO ab apice rostri ad basin caudæ 4 unc. $7\frac{1}{2}$ lin ; caudæ 2 unc. 6 lin.

COLOUR.—The upper surface of the head and the back and sides of the neck broccoli-brown, faintly tinged with yellowish brown, and some of the feathers of the former indistinctly streaked with pale umber-brown ; interscapulars and back intermediate between broccoli and yellowish brown, and slightly glossed with oil-green : rump and upper tail coverts pale yellowish brown. Chin, throat, centre of breast and belly yellowish white ; the sides of the breast the same colour as the head ; the flanks, vent, under tail coverts and thighs rusty sienna-yellow. Lesser wing-coverts, primary and secondary quill-coverts, and the primary, secondary and tertiary quill-feathers brownish red, the lesser wing-coverts and quill-coverts edged and tipped with pale yellowish brown, and the quill-feathers margined externally with light yellowish brown. Tail feathers a light dull reddish brown, edged with yellowish brown, and tipped with white, each feather behind the light tip with a broad transverse brownish-red bar. Bill umber-brown, the base of lower mandible wood-brown. Tarsi and toes reddish-yellow ; claws the same colour, tinted towards the points with brown.

FORM, &c.—Figure slender, tail elongated and much graduated. Bill rather weak, short, nearly straight and pointed, the culmen towards apex of mandible slightly arched. Wings rounded, and when folded reach to the commencement of the second-third of the tail, fourth, fifth, and sixth quill-feathers equal and longest, third and seventh slightly shorter, second and ninth equal and considerably shorter than third, first rather more than half the length of the second ; secondary and tertiary quill-feathers considerably shorter than the longest primaries. Tarsi and toes rather slender, the tarsi anteriorly faintly scutellated, posteriorly entire ; claws weak, short, moderately curved, and pointed.

DRYMOICA AFFINIS.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	9
the tip of the tail	4	7½	of the outer toe	0	3
of the bill to the angle of the			of the middle toe	0	4½
mouth	0	6½	of the inner toe	0	3
of the wings when folded . . .	2	0	of the hinder toe	0	3¼
of the tail	2	6			

MALE.—Not known.

Inhabits dry flats in the interior of South Africa, and flits to and fro in search of insects amongst the shrubs with which they are more or less coated. It is a rare bird in the parts of the country which have been yet explored ; hence, I infer, that the head-quarters of the species will be found beyond the districts which have been traversed. This species exhibits a considerable resemblance to *Drymoica pallida*, but when the two are compared together, very palpable differences are to be discovered. In the present species the tail-feathers are tipped with white, and each has behind the white tip a dark umber-brown bar ; in *D. pallida* the feathers are uniformly of one colour. The bill of *D. affinis* is longer and stronger than that of *D. pallida*, though the bird itself is smaller, and the tarsi of the latter are longer and stronger than those of the former.

DRYMOICA CHERINA.—SMITH.

AVES.—PLATE LXXVII. FIG. 2. (FEMALE.)

D. capite cerviceque profundè rubro-brunneis; interscapulis, alarum tectricibus minoribus, remigium rectriciumque tectricibus brunneis, flavo brunneo-marginatis; rectricibus profunde brunneis albo-terminatis et apicibus albis postice fasciâ latâ nigro-brunneâ marginatis; partibus inferioribus flavo-albis; rostro superne aurantio-brunneo; inferne subflavo; pedibus rubro-flavis.

LONGITUDO ab apice rostri ad basin caudæ 3 unc. 11 lin.; caudæ 1 unc. $7\frac{1}{2}$ lin.

COLOUR.—The upper surface of the head and the back and the sides of the neck deep reddish brown, the last named parts lightest; the interscapulars, the upper tail-coverts, the lesser wing-coverts, quill-coverts, and the tertiary quill-feathers, umber-brown, the feathers edged and tipped with yellowish brown. Back yellowish brown, each feather towards quill dull lavender-purple. The primary and secondary quill-feathers light brownish red, lightest at the points, the primaries, towards quills, and the secondaries throughout narrowly margined externally with yellowish grey. Tail-feathers umber-brown, the two centre feathers tipped narrowly, the others broadly, with white; and each, with the exception of the two centre ones, crossed by an umber-brown bar immediately behind the white tip. The chin, throat, centre of breast, and belly yellowish white; sides of breast and flanks tinted with broccoli-brown. Bill,—the upper mandible orange-coloured brown, the lower mandible light sienna-yellow. Tarsi, toes and claws light reddish yellow.

FORM, &c.—Figure slender; tail very short and rounded; bill long, nearly straight, compressed anteriorly, and pointed at the tip, towards the base triangular. Wings rounded and, when folded, reach over the first half of the tail, the third, fourth, and fifth quill-feathers equal and longest, the sixth slightly shorter, the second a little shorter than the sixth, and the first not quite half the length of the second. Tarsi short, moderately strong, distinctly scutellated anteriorly, entire posteriorly; toes long and slender; claws delicate, considerably curved, and pointed.

DRYMOICA CHERINA.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines
Length from the point of the bill			Length of the tarsus	0	9 $\frac{1}{4}$
to the tip of the tail	3	11	of the outer toe	0	4
of the bill to the angle of the			of the middle toe	0	5 $\frac{1}{2}$
mouth	0	7 $\frac{1}{2}$	of the inner toe	0	3 $\frac{1}{2}$
of the wings when folded . .	1	11	of the hinder toe	0	3 $\frac{1}{4}$
of the tail	1	7 $\frac{1}{2}$			

MALE.—Not known.

This species occurs within the limits of the Cape Colony ; but is a rare bird as compared with *D. tetrrix*. Like the latter, it inhabits situations covered with strong grass, and seeks its food, which consists of small insects, either on the ground or upon the grass itself, along the stalks of which it runs with great facility. It also perches upon small shrubs. The absence of anything like brown spots on the breast forms at once a character by which it is distinguishable from *D. tetrrix*, and the colour of the upper parts, added to the greater size of the bill and feet, constitute diagnostic characters by which it is to be recognized from *D. terrestris*.



DRYMOICA ABERRANS.
(Aves—Plate 78)

DRYMOICA ABERRANS.—SMITH.

AVES.—PLATE LXXVIII. (FEMALE.)

D. capite cerviceque superne pallide castaneis; dorso griseo-brunneo, flavo-brunneo tincto, et obscure brunneo strigata; partibus inferioribus pallide viridi-flavis; rectricibus ad apicem pallidis et fasciis brunneis obscure notatis; superciliis pallide flavis; rostro superne aurantio-brunneo, inferne pallide flavo; pedibus pallide rubro-flavis.

LONGITUDO e rostri apice ad basin caudæ 2 unc. $8\frac{1}{2}$ lin; caudæ 3 unc. 2 lin.

COLOUR.—The upper surface of the head and the back of the neck pale chesnut-brown, deepened with hyacinth-red; the interscapulars and feathers of back intermediate between yellowish and broccoli-brown, each with an indistinct umber-brown shade in the course of the shaft; the under parts a pale rusty olive-yellow, the throat and chin lightest; the sides of breast and the flanks tinged with hair-brown. Lesser wing-coverts dull umber-brown, edged with dull yellowish brown. The primary, secondary, and tertiary quill feathers light brownish red; the primaries and secondaries edged towards quills with pale chesnut-brown; the tertiaries edged and tipped with dull yellowish brown. Tail feathers coloured like the back, lightest at the points, and behind the light points a faint indication on each of a dark spot or bar; the two middle ones edged externally and internally, the rest only externally with yellowish brown. Eyebrows pale sienna-yellow, not distinctly indicated. Bill;—upper mandible light orange-coloured brown, shaded with deep reddish brown, lower mandible straw-yellow. Legs and toes pale reddish yellow.

FORM.—Figure rather robust; tail lengthened and graduated. Bill rather strong and moderately acute, the upper mandible considerably curved towards the point; the sides towards base expanded, towards point perpendicular. Wings rounded, and when folded reach rather beyond the first third of the tail; the fourth and fifth feathers equal and longest, the third and sixth a little shorter, the second about half an inch shorter than the fourth, and the first as much shorter than the second; the secondary and tertiary quill feathers a little shorter than the primaries. Tarsi strong, scutellated anteriorly, entire

DRYMOICA ABERRANS.

posteriorly ; toes moderately long and rather strong ; claws short, considerably curved and pointed ; the claw of the hinder toe the strongest.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	0 $\frac{1}{2}$
the tip of the tail	5	10 $\frac{1}{2}$	of the inner toe	0	3
of the bill to the angle of the			of the middle toe	0	5 $\frac{1}{4}$
mouth	0	8	of the outer toe	0	3 $\frac{3}{4}$
of the wings when folded . . .	2	4	of the hinder toe	0	2 $\frac{1}{2}$
of the tail	3	2			

MALE.—Colour of upper surface of head brighter, and the dusky umber-brown stripes or shades on the back more defined and clearer ; in other respects the colours are like those of the *female*.

The only specimens of this species which I have seen, were shot near Port Natal, while perched upon some brushwood which skirted a tract of marshy ground. Before they resorted to the brushwood, they were observed flitting to and fro among strong rushes, as if in quest of their food, which was found to have consisted of insects.

Although this bird does not exhibit what may be considered all the typical characters of *Drymoica*, it must, in my opinion, nevertheless be regarded as appertaining to that genus, and as being a species which must be ranked as one of the first in the division which includes the aberrant forms. The species represented in Plates 79 and 80 present characters still more remote from those of the true *Drymoica*, yet I cannot bring myself to separate them under another designation, inasmuch as I cannot discover any characters possessed by them which render them more distinct from the less perfect forms in the division comprising the typical species of the genus, than I can perceive between the latter and the more highly typical species. When the species figured in this number and the preceding are viewed in succession, and when each species is compared with the one which appears naturally to stand next to it, no such modifications of structure can be discovered as to justify any one of them being regarded as appertaining to a form different from the rest.



ERYTHRURA CHINENSIS
Linn.

DRYMOICA CHINIANA.—SMITH.

AVES.—PLATE LXXIX. (MALE.)

D. capite cerviceque supernè cinnamomeis, plumis flavo-brunneo-marginatis; dorso brunneo-rubri, plumis pallide griseo-brunneo-marginatis; rectricibus, brunneo-rubris apicibus griseo brunneis et pone fusco-fasciatis; gulâ et ventre albis; pectoris ventrisque lateribus griseo-brunneo flavo-tinctis; gutture pectoreque ochraceo-albis; rostro superne flavo-brunneo infra subflavo; pedibus rubro-flavis.

LONGITUDO e rostri apice ad basin caudæ 2 unc. $10\frac{1}{2}$ lin; caudæ 2 unc. $10\frac{1}{2}$ lin.

COLOUR.—The upper surface of the head, and the back and upper parts of the sides of neck, intermediate between yellowish brown and hyacinth-red (a bright cinnamon-brown), the feathers narrowly edged and tipped with light yellowish brown. The interscapulars, the lesser wing coverts, and the feathers of the back brownish red, each edged and tipped with wood-brown. Rump and upper tail coverts pale broccoli-brown, the feathers narrowly edged and tipped with light wood-brown. The primary and secondary quill coverts umber-brown, the former narrowly edged, externally, and the latter broadly edged and tipped with wood-brown. The primary and secondary quill feathers brownish red, the outer vanes of the primaries, towards quills, broadly edged with yellowish brown, towards the tips narrowly with wood-brown, the tips the same colour; secondary quill feathers edged externally with a brighter tint of yellowish brown, and towards and at tips wood-brown; the tertiary quill feathers umber-brown, edged and tipped with yellowish brown, passing, close to margins, into wood-brown; the inner vanes of all the quill feathers towards base sienna-yellow. Tail,—the two middle feathers yellowish brown, lightest at the edges, the other feathers light brownish red, brightened towards edges with yellowish brown, the tips dull wood-brown, and behind them a broad bar of umber-brown. Chin and centre of belly white; throat and centre of breast pale ochrey-white; the side of the neck and breast, the flanks, and the under tail-coverts pale hair-brown tinged with sienna-yellow. Bill,—upper mandible yellowish brown, shaded at base and near the tip with dull chesnut-brown; lower mandible

DRYMOICA CHINIANA.

sienna-yellow, shaded near the point with dull chesnut-brown. Tarsi, toes, and claws reddish yellow, the latter lightest.

FORM, &c.—Figure rather robust; bill considerably arched, especially towards the tip, which is pointed; cutting edge of upper mandible entire; lower mandible slightly curved downwards. Tail rather long and moderately graduated. Wings rounded, and when folded, reach as far as the commencement of the second fourth of the tail, the fourth quill feather rather the longest, the third and fifth equal and slightly shorter, the second considerably shorter than the third, and the first about half the length of the second; the tertiary quill feathers nearly as long as the primaries. Tarsi and toes strong and rather short, the former scutellated anteriorly, entire posteriorly, the hinder toe the most powerful: claws rather short, strong, much curved and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	9½
the tip of tail	5	9	of the outer toe	0	4
of the bill to the angle of the			of the middle toe	0	6
mouth	0	7½	of the inner toe	0	4
of wings when folded	2	9	of the hinder toe	0	3½
of tail	2	10½			

FEMALE.—Not known.

Only one specimen of this species was obtained, and that was killed while perched upon some brushwood growing near the edge of a small stream to the northward of Kurrichane. In its habits it resembled the species already described, and, at the time it was shot, it was moving quickly about among the branches apparently in quest of its food, which was found to consist of insects.



LYM. CO. NATALENSIS
(Aves. Plate)

DRYMOICA NATALENSIS.—SMITH.

AVES.—PLATE LXXX. (MALE.)

D. superne flavo-rufus valide brunneo-strigatus; gulâ guttureque albis; pectore ventreque subflavis; rectricibus rubro-brunneis rubro-aurantio-marginatis et flavo-albo-terminatis, plumis versus apicem profunde brunneo-fasciatis; rostro subflavo superne rubro-brunneo-umbrato; pedibus rubro-aurantiis.

LONGITUDO e rostri apice ad basin caudæ 3 unc. 11 lin; caudæ 3 unc. 4 lin.

COLOUR.—The upper surface of the head, the back and sides of neck, the interscapulars, the back, the upper tail-coverts, the lesser wing-coverts, and the rump intermediate between reddish and buff orange, and each of the feathers, excepting those of the rump, marked in the course of the shaft with a broad longitudinal dark umber-brown stripe. Tail feathers reddish brown, edged with reddish orange, and tipped with pale buff orange; behind each light tip a broad transverse bar of deep umber-brown, the bars indistinct on the two centre feathers; the tips of several of the lateral feathers nearly pure white. Primary and secondary quill-coverts umber-brown margined and tipped with pale buff orange. Primary and secondary quill feathers brownish red, margined, externally, towards quills, with dull reddish orange; tertiary quill feathers deep umber-brown, margined and tipped with reddish orange. Chin and throat white; breast, belly, vent, and under tail-coverts sienna-yellow, the flanks darkest. Bill pale sienna-yellow, the upper mandible towards culmen deep reddish brown; legs, toes, and claws pale reddish orange.

FORM, &c.—Figure robust and rather squat; tail graduated. Bill strong and pointed, compressed anteriorly, triangular posteriorly, depth much greater than breadth; culmen arched from front strongly towards the point; lower mandible inferiorly, nearly straight, the cutting edge of upper mandible entire; nostrils narrow, longitudinal, each in a somewhat triangular hollow, close to base of bill, and superiorly edged with a horny membrane; some strong bristles at angles of mouth. Wings rounded, and when folded reach a little beyond the base of the tail; the fourth, fifth, and sixth quill feathers

DRYMOICA NATALENSIS.

equal and longest; the third and seventh equal and a little shorter; the second about half an inch shorter than the longest; and the first about half the length of the second; the tertiary quill feathers nearly as long as the primaries. Tarsi robust, anteriorly scutellated, posteriorly entire; toes long and rather strong, particularly the posterior one; claws long, much curved and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	1½
the tip of the tail	7	3	of the outer toe	0	5¾
of the bill to the angle of the			of the middle toe	0	8
mouth	0	8½	of the inner toe	0	5
of the wings when folded . .	3	0½	of the hinder toe	0	5
of the tail	3	4			

FEMALE.—Not known.

Inhabits the neighbourhood of Port Natal, and the specimen described was shot upon reeds, among which it was flitting to and fro in search of insects, which, from the ingesta found in its stomach, appeared to have been its sole food.



POLYBOROIDES TYPICUS
(Aves. Plate 81)

POLYBOROIDES TYPICUS.—SMITH.

AVES.—PLATES LXXXI. (ADULT FEMALE.)

P. capite, cervice, pectore interscapulisque cinereis, ferrugineo-tinctis, his lineis rubro-brunneis vermiculatis; dorso ventreque fasciis albis nigro-brunneisque fasciatis; plumis scapularibus maculis virido-nigris notatis; caudâ nigro-brunneâ purpureo-tinctâ, versus apicem fasciâ albâ transversâ, versus basin fasciis duabus aut tribus irregularibus ejusdem coloris; tarsi compressis reticulatis; capitis lateribus nudis; oculis flavis.

LONGITUDO e rostri apice ad basin caudæ 14 unc. ; caudæ 16 unc.

FALCO GYMNOGENYS, Temm.—Pl. col. 307.

POLYBOROIDES TYPICUS, Smith.—South African Quarterly Journal, March, 1830.

GYMNOGENYS MADAGASCARIENSIS, Less.—Traité d'Ornith. Paris, Nov. 1830.

COLOUR.—The head, neck, breast, interscapulars, scapulars and lesser wing-coverts, rusty pearl grey, the three last vermiculated transversely with delicate reddish brown lines and several of the scapulars variegated beside near their tip with a large greenish black blotch. The back, upper tail coverts, belly, vent, under tail coverts and thighs alternately barred white and liver-brown, the bars transverse and narrow, and each of the white ones has a fine prolongation, following in the course of the shaft, directed towards the point of the feathers. The primary and secondary quill coverts rusty pearl-grey each with an irregular greenish black blotch towards the point most distinct on the outer vane, their tips white. The primary quill feathers deep liver-brown with either a purple or greenish gloss according to the light in which they are observed, and the tips of all or only part of them white; the secondaries towards quills pearl-grey with the inner vanes vermiculated with brownish red, towards the tips they are greenish black, and the tips themselves are white margined faintly with yellowish brown. Tail feathers the same colour as the primary quill feathers, and each is crossed towards the tip with a broad white bar, and towards the base with two or three narrow irregular ones, the inner vanes besides are variegated with oblique irregular white lines; the broad white bar towards the tip is freely variegated with numerous liver-brown

POLYBOROIDES TYPICUS.

or brownish red lines. Legs and toes light ochre-yellow; claws liver-brown with a tinge of reddish brown towards the base. Bill liver-brown; cere, base of lower mandible, naked space on sides of head, and the eyes yellow.

(*Young.*) PLATE LXXXII.

Front yellowish white sparingly streaked with umber-brown; the upper surface of the head and the nape light umber-brown, the feathers of former broadly, those of latter narrowly edged and tipped with yellowish brown; the back and sides of the neck, the interscapulars, the back, the lesser wing coverts and the secondary quill coverts intermediate between umber and yellowish brown and faintly glossed with purplish red,—all the feathers narrowly edged and tipped with yellowish brown. Primary quill coverts liver-brown with a purplish gloss, and tipped narrowly with yellowish brown; tertiary quill feathers dull yellowish brown indistinctly barred with umber-brown. Tail the same colour as the primary quill feathers and crossed with four dull yellowish brown bars, each of which is edged anteriorly and posteriorly with a lighter tint,—the tips of all the feathers yellowish-brown. Chin and throat yellowish white variegated with longitudinal umber-brown streaks; breast and belly yellowish brown deadened with umber-brown; thighs, vent and under tail coverts pale yellowish brown barred with a colour intermediate between umber and yellowish brown. Tarsi yellowish white; toes a livid ochrey white. Cere, base of lower and edges of upper mandible towards base yellow, the bill elsewhere liver-brown. Eyes yellow.

FORM, &c.—Figure slender; head rather small, and its sides before and behind the eye denuded of feathers; the feathers of nape and of the back and sides of the neck rather elongated. Wings long, pointed, and when folded reach to within two inches of the tip of the tail, the fourth and fifth feathers the longest, the third and sixth equal and rather shorter, the second about an inch and a half shorter than the third, and the first about three inches shorter than the second. Tail large and rounded, or fan-shaped. Tarsi and toes except the last joint reticulated, the scales of the former rather large, of the latter small, the last joint of each toe superiorly covered with three or four short prominent transverse plates; tarsi compressed; under-surface of toes finely granular; claws long, pointed, much curved, compressed and moderately strong. Bill considerably hooked at the point; nostrils situated in the cere in the form of a longitudinal fissure about half-way between the culmen and cutting edge of the upper mandible.



POLYBOROIDES TYPICUS (Young)
(Aves. Plate 82)

POLYBOROIDES TYPICUS.

DIMENSIONS OF FEMALE.

	Inches.	Lines.		Inches.	Lines
Length from the point of the bill to			Length of the tarsus	4	3
the tip of the tail	30	0	of the outer toe	1	2
of the bill to the angle of the			of the middle toe	1	10
mouth	1	10	of the inner toe	1	2
of the wings when folded. . .	16	0	of the hinder toe	0	11
of the tail.	16	0			

Male.—The exact colours are not known.

This species has a wide range, being found in Madagascar, and throughout the whole of Africa ; at least I infer the latter from having myself found it in most parts of Southern Africa, and from having seen good drawings of both the adult and young, which were killed on the Gold Coast.



QUAIL CALIF. - CALIF. - Male
Aves - Plate 2

FRANCOLINUS GARIEPENSIS.

AVES.—PLATE LXXXIII.—MALE.

F. fronte, capite, cerviceque superne rubro-brunneis, plumis rubro-aurantio-marginatis; cervice fasciis duabus nigro-brunneis albo-maculatis notatâ, fasciâ superiore ad basin cervicis desinente; dorso aurantio-brunneo, nigro-brunneo, aurantio, et griseo variegato; gulâ guttureque superne albis; pectore rubro-aurantio, subflavo, et griseo variegato, plumis fasciis nigro-brunneis notatis; ventre, flavo-aurantio, aurantio-rubroque strigato; tarsis pedibusque flavo-aurantiis; rostro brunneo-rubro versus basin flavo; oculis brunneo-rubris.

LONGITUDO e rostri apice ad basin caudæ 14 unc.; caudæ 3 unc. 9 lin.

COLOUR.—The forehead, the upper surface of the head, and the back of the neck dull reddish brown, all the feathers edged with pale rusty orange, and some of them towards the back marked in the course of the shaft with a stripe of a like colour, the proportion of the light tint greatest towards the interscapulars. The sides of the neck are variegated with two arched liver-brown bars mottled with white, the upper one originating at the outer canthus of the eye, the other at the base of the lower jaw; and they are separated from each other by a rusty orange stripe sparingly mottled with umber-brown. The superior of these arches terminates towards the base of the neck, the other joins its fellow of the opposite side, and forms a dark semicircle in front of the neck, the convexity of which is backwards; the uppermost arch is separated from the parts of the hind head and neck already described by a rusty orange band sparingly dotted with brown. The chin and part of the throat anterior to the dark semicircle white, and the front and sides of the neck below it, as also the breast a colour intermediate between orpiment and reddish orange, variegated with longitudinal bars of light cream-yellow, one on each feather, some of them occupying nearly the entire of the outer vane, and broken by narrow transverse liver-brown bars; the tips dull pearl-grey. Belly mottled with irregular blotches of bright buff-orange, and a colour intermediate between orpiment and reddish orange; thighs and

FRANCOLINUS GARIEPENSIS.

under tail coverts light buff-orange faintly barred with umber-brown. Interscapular and back variegated with bright orange-brown, liver-brown, light buff-orange, and dull pearl-grey,—the buff-orange in narrow stripes, one along the centre of each feather, the liver-brown in transverse bars, which are both before and behind edged with reddish orange; the pearl-grey towards and at the tips of the feathers in many specimens fades into white. The lesser wing coverts are barred both longitudinally and transversely with buff-orange, and each bar is edged with liver-brown,—on these feathers the pearl-grey is more distinct than on those of the back. Primary and secondary quill feathers dull umber-brown, the former finely freckled with small buff-orange spots, the latter with pale reddish orange bars which change into white towards the edges of the outer vanes, the inner vanes towards quills light orange-red; the tertiaries and scapulars with a reddish orange line in the course of their shaft, and barred transversely with the same colour, each bar being edged before and behind with liver-brown, and between the edgings the colour is a light pearly grey, finely mottled with umber-brown. Tail umber-brown, with waved, transverse, reddish orange bars, the feathers, particularly at the tips, tinted with pearl-grey. The edge of the upper mandible towards its base, and the base of the lower one reddish yellow, elsewhere brownish red. Legs and toes a rusty buff-orange; claws brownish-red; the base of the spur reddish yellow, the remainder brownish red. Eyes deep brownish red.

FORM, &c.—Figure moderately robust; head rather small; bill much arched towards the point, the upper mandible considerably longer than the lower, and obtuse at the point. Wings rounded, and when folded reach a little beyond the base of the tail; the third quill feather the longest, the second and fourth a little shorter, the first about an inch shorter than the second; tertiaries and scapulars nearly as long as the primaries. Tail rather long and rounded at the tip. Tarsi compressed, anteriorly coated with large scales, laterally with small scales, and behind with scales of an intermediate size. Toes slender, with rudimentary webs; claws slightly curved, rather slender, and blunt at the point; spur originating on the inner and posterior aspect of the tarsus is short, curved, and towards the point turned obliquely upwards.



FRANCOLINUS GARIEPENSIS. (Female.)
(Aves. Plate 84)

FRANCOLINUS GARIEPENSIS.

Female.—The colours and the manner in which they are distributed are nearly the same as in the *Male*; the tints however are less bright, and the depth of the colours are not so great; the tarsus is without a spur.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	10
the tip of tail	14	0	of the outer toe	0	7½
of the bill to the angle of the			of the middle toe	0	10
mouth	1	4	of the inner toe	0	6½
of the wings when folded . .	6	9	of the hinder toe	0	3
of the tail	3	9	of the spur	0	4

This species bears a strong similarity to *Francolinus Levallantii*, but the points in which it differs are readily discovered when specimens of both are viewed together, or when representations of each are placed in contrast. The difficulty of discriminating between these so nearly allied species without the aid of illustrations, has induced me to re-figure *F. Levallantii*, and the leading differences will be found particularized in the observations following the description of that species. The *F. Gariepensis* occurs towards the sources of the Caledon and Vaal Rivers, and is generally if not always found upon open grassy slopes, in which situations its call, especially in the mornings and evenings, is very frequently heard, and it seems to be uttered as it rapidly pursues its course among the grass which generally abounds where it resorts.



FRANCOLINUS LEVAILLANTII.

AVES.—PLATE LXXXV. (FEMALE.)

F. capite superne brunneo-rubro, plumis brunneo-flavo marginatis; cervice pallide cinnamomeâ fasciis nigro-brunneis albo maculatis tribus longitudinalibus variegatâ, quarum unâ inter nucham et interscapulium; dorso nigro brunneo, griseo, flavo-auranteo, et rubro-aurantio variegato; pectore ventreque pallide rubro-aurantiis, subflavo strigato, plumis versus apicem nigro-brunneo-fasciolatis; tarsis pedibusque ochreis; rostro rubro-brunneo versus basin flavo; oculis vivide rubro-aurantiis.

LONGITUDO e rostri apice ad basin caudæ 14 unc. 6 lin.; caudæ 2 unc. 6 lin.

PERDIX LEVAILLANTII, Temm. Pl. color. pl. 477.

COLOUR.—The front and upper parts of the head brownish red, the feathers edged and tipped with brownish yellow. The neck light reddish orange, rather bright, and variegated by three moderately broad liver-brown bands, spotted with white; one from the nape to the interscapular and widening as it approaches the latter, the other two, one on each side, arise immediately behind the base of the upper mandible, pass under the eyes, then take a semicircular course and terminate in an expanded blotch, which is coloured and variegated like themselves, and situated immediately in front of the breast. Interscapulars and back varied liver-brown, dull pearl-grey, buff-orange, and reddish orange; the buff-orange is in the form of longitudinal stripes, the reddish orange in narrow transverse lines, and the grey is chiefly disposed towards the tips of the feathers. Breast and belly light reddish orange, each feather with a longitudinal clear senna-yellow stripe, and semi-transverse or oblique liver-brown bars near the tip, the latter is faintly tinted with pearl-grey. The outer vanes of the primary and secondary quill feathers, and a portion of their inner vanes towards the tips are deep reddish orange, elsewhere dull brown, speckled with light reddish orange. Tail umber-brown, and crossed with narrow lines of clear buff-orange, each line edged before and behind with liver-brown. Thighs pale brownish yellow, barred with reddish brown. Legs and toes ochre-yellow. Claws brownish yellow, shaded with reddish brown. Bill reddish brown, with the base of the lower and the margin of the upper mandible near its cutting edge yellow. Eyes bright reddish orange.

FRANCOLINUS LEVAILLANTII.

FORM, &c.—Figure moderately robust. Head small. Bill long and slightly arched, the upper mandible much longer than the lower, flattened and spatulate towards the point, the latter obtuse and semicircular. Wings rounded, and when folded reach a little beyond the base of the tail; the fourth, fifth, and sixth quill feathers longest, the second and third rather shorter, and the first a little shorter than the second. Tail rather short and rounded at the point. Tarsi compressed and reticulated, the scales in front large, those behind rather smaller, and what cover the sides the smallest. Toes moderately strong, with distinct rudimentary webs, the web between the outer and middle toes well developed. Claws considerably curved, rather strong and blunt at the points.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	2	0
the tip of the tail	14	6	of the outer toe	0	11
of the bill to the angle of the			of the middle toe	1	2½
mouth	1	8	of the inner toe	0	8½
of the wings when folded . .	6	6	of the hinder toe	0	3½
of the tail	2	6			

Male.—Colours nearly the same as those of the female. In some specimens each sex has the tarsi armed with a spur, in others that appendage is not found in either.

Specimens of this *Francolin* are found in many districts of the Cape Colony; but the numbers are greatest towards the sea-coasts, and in the eastern parts of the settlement. They occur chiefly in open grassy plains; and they seek their food, which consists in a great measure of small bulbous roots, among the herbage. When they are disturbed in their favourite localities, they generally seek concealment in whatever brushwood may exist in the neighbourhood; and when once they reach the cover it is no easy matter to get them again on the wing. They continue motionless even though the copse be beaten by dogs; and as they perch on such occasions, they are rarely discovered but by the hunters, who look for them among the branches.

This species manifests a considerable resemblance to *Francolinus Gariensis*; but when the two are contrasted many marked differences are palpable. The arrangement and tints of the colours, if no better character existed, would even evince that they are not identical; but there are more palpable and ready diagnostics by which each is to be recognised. The bill of *F. Levallantii* is much longer and stronger than that of *F. Gariensis*; the number and distribution of bands on the neck are different, the tarsi are considerably longer, the feet larger, and the tail is shorter.



ARDEA ATRICOLLIS. A Adult B.Young
(Aves _Plate 86)

ARDEA ATRICOLLIS.—FEMALE.

AVES.—PLATE LXXXVI.

Capite, cristâ, cerviceque superne viridi-nigris; gulâ guttureque summo albis; gutture infimo albo nigro-striato; interscapulis nigro-purpureis viride nitentibus; pectore ventreque flavo-cinereis; tarsis pedibusque viridi-nigris; mandibulâ superiore antice purpureo brunnea; spatio nudo circa oculos flavo; mandibulâ inferiore antice brunneâ, postice flavâ.

LONGITUDO e rostri apice ad basin caudæ 35 unc.; caudæ 7 unc.

ARDEA ATRICOLLIS, Wagler, Syst. Avium, pars prima.

COLOUR.—The upper and lateral parts of the head, the nape, the crest feathers, and the sides and back of the neck deep black glossed with green, the latter, particularly towards the interscapulars, lightest and faintly tinted with grey. Interscapulars deep blackish purple, with a greenish gloss; the back rusty pearl-grey. Tail blackish purple, glossed with green. The lesser wing coverts dark pearl-grey, tinged more or less with a rusty yellowish brown; the outer vanes of the primary and secondary quill coverts pearl-grey, the inner vanes dark lavender-purple, fading towards the quills into white. The outer vanes of the primary quill feathers a deep lavender-purple, the inner vanes blackish purple tinted with brown, which towards the points fades into lavender-purple; the secondary quill feathers blackish purple glossed with green; the tertiaries deep lavender-purple; the scapular feathers deep lavender-purple, glossed with green. The chin, the upper parts of the throat, and the sides of the neck pure white; the middle of the throat white, longitudinally streaked with black glossed with green; lower parts of the throat white, sparingly streaked with faint blackish lines; the long feathers pendent from the front and sides of the neck near to the breast pearl-grey, variegated with yellowish grey, and some of them streaked with white. The breast, belly, vent, and under tail coverts intermediate between pearl and yellowish grey, the under tail coverts darkest. Thighs yellowish grey. The naked

ARDEA ATRICOLLIS.

portion of the tibia, the tarsi, toes, and claws, greenish black. The base of the upper mandible, and the bare space before and behind each eye, gamboge-yellow, the remainder of the mandible liver-brown; the lower mandible towards the tip reddish-brown, elsewhere light-yellow. Eyes gamboge-yellow.

Young.

The upper surface of the head and the back, and the sides of the neck, pearl-grey, with more or less of a rusty tint; the sides of the head pearl-grey, tinted with greyish black; interscapulars pearl-grey, strongly tinted with clove-brown, and glossed with green. The scapulars and lesser wing coverts rusty pearl-grey; the primary quill feathers coloured as in the adult, only the tint not so vivid; the outer vanes of all the secondaries edged with pearl-grey; edges of the shoulder and axilla white; the outer vanes of the false wing feathers greenish black, the inner ones pearl-grey. Chin, sides of neck anteriorly, and throat rusty-white, the latter marked with a distinct longitudinal stripe of light yellowish brown; lower part of throat and breast pale pearl-grey with a rusty tinge; belly and vent yellowish white; outer sides of thighs pearl-grey tinted with yellowish grey. Bill and legs coloured like those of the adult, only the reddish-brown tint is more distinct.

FORM, &c.—Figure rather robust, resembling that of the common heron (*Ardea major*); head bushy and with two or three feathers, each about six inches in length, hanging from the nape. Bill rather short, very strong, and pointed, the lower mandible rather longer than the upper. Wings rounded, and when folded, reach nearly to the tip of the tail, the second quill feather rather the longest, the first, third, and fourth rather shorter and equal, the remainder rather shorter, and not quite so long as the secondaries; the tertiary quill-feathers about an inch and a half shorter than the primaries. The scapulars nearest to the centre of the back elongated, many of them extending considerably beyond the base of the tail, and are narrow, pointed, and somewhat decomposed. The feathers of the sides of the neck in front of the wings are long, pointed, and pendent in front of the breast. Tail short and nearly equal, or only slightly rounded. Tarsi and toes robust, the former reticulated with large scales, the latter coated with transverse plates; about an inch and a half of the lower part of tibia bare and covered with small scales. Claws strong, slightly curved, and pointed; the outer and middle ones connected at the base by a distinct rudimentary web; the hinder claw the longest, strongest, and most curved.

ARDEA ATRICOLLIS.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	5	10
the tip of the tail	35	0	outer toe ..	2	4
of the bill to the angle of the			middle toe	2	10
mouth.....	5	6	inner toe	2	0
of the wings when folded	16	0	hinder toe.....	1	3
of the tail	7	0			

MALE.—The exact colours not known.

This bird is seldom seen in South Africa, and all the specimens which came under my observation were procured on the western coast of the Colony, towards the mouth of the Orange River. It builds its nest upon trees, and the only adult specimen I myself obtained was shot on leaving its nest, which was situated on the top of a tree immediately above one of a bird of prey. The nest contained two young ones, and an addled egg; the latter was of a greenish white colour.



1 ALANDA CODEA
2 ALANDA LAGEPA.
(Aves — Plate 87.)

ALAUDA CODEA.—SMITH.

AVES.—PLATE LXXXVII. FIG. 1. (FEMALE.)

A. suprâ flavo-grisca brunneo-strigata; gulâ guttureque albis; pectore albo, brunneo-rubro-strigata; ventre rufo-albo; superciliis albis; rostro pedibusque aurantio-brunneis, brunneo-rubro-umbratis.

LONGITUDO è rostri apice ad basin caudæ 3 unc. 9 lin.; caudæ 2 unc. 9 lin.

COLOUR.—The upper surface of the head, neck, and body rusty yellowish grey, the head, neck, and interscapulars variegated with longitudinal streaks of brownish red, washed or tinted with yellowish grey. Chin and throat pure white; breast white, mottled with spots or stripes of brownish red; belly rusty white, the flank tinted with pale brown; thighs wood-brown. Lesser wing coverts and primary and secondary quill coverts brownish red, edged and tipped with white; primary and secondary quill feathers the same colour, the outer vanes of the primaries towards their base narrowly edged with white, the secondaries edged externally and tipped with white; tertiary quill feathers umber-brown, edged and tipped with white. The two middle tail feathers reddish brown, glossed with grey, the rest umber-brown, and all, but particularly the external one of each side, edged and tipped with rusty white. Under tail coverts white, streaked with brownish red. Eyebrows white; ear coverts intermediate between broccoli and light orange-coloured brown. Bill, legs, toes, and claws deep orange-coloured brown, shaded with brownish red, the lower mandible towards the base sienna-yellow.

FORM, &c.—Figure rather slender: head rather small and towards nape full of feathers. Bill moderately long, subconical, and nearly straight; the culmen towards the tip much arched, lower mandible towards the point slightly curved. Wing rounded, and when folded reaches a little beyond the first half of the tail; the tertiary quill feathers rather longer than the secondaries, and slightly shorter than the primaries, the third, fourth, fifth, and sixth primary quill feathers equal and longest, the second a little shorter, and the

ALAUDA CODEA.

first not quite half the length of the second. Tail even, or very slightly rounded. *Tarsi* moderately strong, and anteriorly and posteriorly scutellated; toes rather short and slender; the claws of front toes short, slightly curved, and slender, the claw of hinder toe long, slender, and a little curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	0
the tip of tail	6	6	of the outer toe	0	4
of the bill	0	9	of the middle toe	0	5½
of the wings when folded . .	3	6	of the inner toe	0	4
of the tail	2	9	of the hinder toe	0	4
			of the hinder claw	0	5

Male.—The only male specimen of this species which I obtained in South Africa had not attained to the adult plumage; the grey of the upper parts was strongly tinged with rufous, and the rump and upper tail coverts were almost entirely of that tint; the lower part of the throat was, like the breast, streaked with brownish red, and the bill was considerably shorter than in adult females, more conical, and the culmen towards the point less curved.

This species is sparingly scattered over the Western districts of the Cape Colony, and is generally found upon the Karroo plains between the Oliphant and Orange Rivers. The specimens I observed were in localities thinly furnished with low brushwood, and they rarely failed, when they were disturbed in these situations, to fly to a distance, and then perch upon the summit of some dwarf shrub, from whence they might ensure a view of any person who might follow them.

The bill in adult specimens of this species has considerable similarity to that of the *Certhi-
lauda*; and were the nostrils not covered with recumbent wiry bristles, it would be difficult to point out any very palpable character by which it could be distinguished from the bill of a species of that subdivision.

ALAUDA LAGEPA.—SMITH.

AVES.—PLATE LXXXVII. FIG. 2. (MALE.)

A. supra ferruginea, fusco-virgata; infra alba, pectore fusco-strigato; remigibus rectricibusque brunneis rufo-marginatis; superciliis albis; rostro rubro-brunneo; oculis brunneis; pedibus flavo-brunneis carneo-tinctis.

LONGITUDO è rostri apice ad basin caudæ 3 unc. 4 lin.; caudæ 3 unc.

COLOUR.—The upper surface of the head, neck, and back, intermediate between brownish and reddish orange, and variegated with short streaks of umber-brown, each feather having a stripe of that colour in the course of the shaft,—the stripes of the head and interscapulars darkest and best marked. The under parts white, streaked on the throat, breast, and flanks with umber-brown,—the streaks largest and most numerous on the breast. The lesser wing coverts anteriorly marked like the feathers of the back, the hinder ones, together with the primary and secondary quill coverts, and the tertiary quill feathers umber-brown edged, and tipped with sienna-yellow. The primary and secondary quill feathers intermediate between broccoli and umber-brown, the former towards the base and the latter throughout the whole length of outer veins edged with reddish orange, towards the margin fading into sienna-yellow. Tail feathers the same colour as the primary quill feathers, the two outermost of each side darkest, almost umber-brown, the two middle feathers have each vane edged with light reddish orange, the remainder have only the outer vein narrowly edged with that colour. Under tail coverts white, each with a clear reddish orange stripe in the course of the shaft. Bill light reddish brown, the lower mandible towards base pale buff orange. Eyes bright brown; eyebrows rusty white. Legs and toes intermediate between broccoli and yellowish brown, and tinted with flesh-red; claws light reddish brown.

ALAUDA LAGEPA.

FORM, &c.—Figure moderately robust. Head rather large ; bill elongated, subconical, rather slender and pointed, the culmen slightly arched from the base ; wings rounded, and when folded, reach to the commencement of the second third of the tail, the fourth and fifth quill feathers equal and longest, the third rather shorter than the fourth, the second shorter in a like proportion to the third, the first about an inch in length ; the tertiary quill feathers rather shorter than the primary ones, and slightly longer than the secondary quill feathers. Tail even, or very slightly rounded. *Tarsi* and toes short, and moderately strong, the former anteriorly and posteriorly scutellated ; claws of front toes short, and slightly curved, claw of hinder toe elongated, slender, and slightly arched.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	10½
the tip of the tail	6	6	of the outer toe	0	3
of the bill	0	9	of the middle toe	0	5
of the wings when folded . . .	3	7½	of the inner toe	0	3
of the tail	2	10½	of the hinder toe.	0	3
			of the claw of hinder toe . . .	0	4½

The colours of the *female* the same as those of the male only not so bright.

This species is thinly distributed between the Berg and Orange Rivers, close to the western coast, and specimens are usually found on sandy or Karroo plains, which are sparingly covered with brushwood. It whistles occasionally in the mornings, soars like true larks, and on descending from its aerial flights, commonly perches on the shrub nearest to the point where it descends. It consumes as food seeds and small insects.



1. MIRAFRA AFRICANA
2. MIRAFRA APICANOIDES.
(Aves — Plate 88.)

MIRAFRA AFRICANA.—SMITH.

AVES.—PLATE LXXXVIII. FIG. 1.

M. suprà fusca; capitis cervicisque plumis rubro-aurantio, dorsi plumis sordide albo griseove marginatis: gulâ guttureque albis; pectore pallide rubro-aurantio, maculis fuscis variegato; ventre subflavo rubro-aurantio-tincto; remigibus primariis secundariisque versus basin rubro-aurantio-marginatis; rostro flavo-brunneo, castaneo-umbrato; pedibus subflavis, carneo-tinctis.

LONGITUDO è rostri apice ad basin caudæ 5 unc. 2 lin.; caudæ 2 unc. 4 lin.

COLOUR.—The upper surface of the head streaked liver-brown and clear reddish orange, the edges of the feathers, particularly of those towards the nape, being of the latter colour; back and sides of neck umber-brown, with the edges of each feather either reddish orange or sienna-yellow. Back liver-brown, the feathers edged broadly and tipped narrowly either with rusty white or rusty grey,—the latter most abundant and distinct on the rump and upper-tail coverts. Chin and commencement of throat white; middle of throat and sides of neck immediately behind ear-coverts white, mottled with small, triangular, umber-brown spots. Breast anteriorly sienna-yellow, posteriorly light reddish orange, and each feather is marked, in the course of the shaft, with a narrow liver-brown stripe which expands towards the point of the feather into an angular spot. Belly sienna-yellow, tinted with reddish orange; the under tail coverts cream-yellow. The lesser wing coverts are reddish orange towards the edges, greyish brown along the shaft; the primary quill coverts intermediate between orpiment and reddish orange, and each is marked with a liver-brown line following the course of the shaft; the outer vanes of the secondary quill feathers are brownish grey edged with rusty white, the inner vanes towards the shaft liver-brown, elsewhere colored like the primary quill coverts. Primary quill feathers towards base reddish orange, shaded with deep reddish orange, towards points intermediate between broccoli and umber-brown; secondaries coloured like the primaries, and towards and at the tip edged with rusty white; tertiary quill feathers

MIRAFRA AFRICANA.

pale orange-coloured brown, more or less shaded with dark liver-brown, and each distinctly edged with white, the inner margin of which is bounded by a dark liver-brown line. Tail intermediate between umber and broccoli-brown, the outer vanes of the two lateral feathers of each side cream-yellow. Eyebrows sienna-yellow; eyes clear brown. Bill clear yellowish brown, shaded with chesnut-brown. Legs, toes, and claws intermediate between buff orange and flesh-red.

FORM, &c.—Figure rather full. Head small; bill lengthened, subconical, moderately strong, and the culmen towards tip slightly curved; nostrils uncovered. Wings rounded, and when folded, reach nearly to the middle of the tail, the fifth quill feather rather the longest, the third and fourth equal and scarcely shorter than the fifth, the second about three lines shorter than the third, and the first not exceeding an inch in length; the tertiary and secondary quill feathers nearly of equal length, and about half an inch shorter than the primaries. Tail slightly rounded. Legs and toes stout, the former anteriorly and posteriorly scutellated; claws of anterior toes, short, rather strong, and slightly curved, claw of hinder toe long, slender, pointed, and slightly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsi	1	3
the tip of the tail	7	6	of the outer toe	0	3½
of the bill	0	10	of the middle toe	0	6
of the wings when folded . . .	3	9	of the inner toe	0	3½
of the tail	2	4	of the hinder toe	0	3½
			of the claw of hinder toe . . .	0	6

The colours in both sexes are the same,—only those of the male are brightest.

This bird, as far as my experience goes, is principally confined to the Eastern districts of the Cape Colony, and specimens are most readily procured upon the grassy plains which exist near Algoa Bay, or between it and Graham's Town. Over these flats it is thinly distributed, and rarely are more than two individuals found together. It feeds upon seeds and small insects.

MIRAFRA AFRICANOIDES.—SMITH.

AVES.—PLATE LXXXVIII. FIG. 2.

A. supra fusca, plumis rufo-marginatis, subtus rufo-alba, pectore parè fusco maculato; remigibus griseo-fuscis versus basin ferrugineis; caudâ fuscâ, rectrice utriusque lateris exterâ albo-marginatâ; rostro flavo-brunneo, brunneo-tincto; pedibus unguibusque pallide rubro-flavis.

LONGITUDO è rostri apicé ad basin caudæ 3 unc. 6 lin.; caudæ 2 unc. 6 lin.

COLOUR.—Head superiorly umber-brown, all the feathers edged and narrowly tipped with a tint intermediate between reddish and orpiment-orange; back and sides of neck dirty pale umber-brown, each feather edged and tipped with wood-brown; the interscapulars and back dull umber-brown, the feathers edged with light reddish orange; rump and upper tail coverts greyish brown, all the feathers narrowly edged with rusty white. The chin, throat, breast, and belly rusty white, the sides of the breast and flanks tinted with reddish orange, and the middle of the breast sparingly mottled with sub-triangular, pale, umber-brown spots; under tail coverts pure white. The lesser wing coverts dull umber-brown, edged with reddish orange; the primary and secondary quill coverts coloured the same, and towards the tips are edged with sienna-yellow; the primary, secondary, and tertiary quill feathers intermediate between broccoli and umber-brown, excepting the outer vanes of all but the two outermost towards their base, and the edges of the inner vanes of all but the first primary quill feather, which are intermediate between broccoli and orange-red; the tertiaries edged and tipped with reddish orange, which at their margin fade into wood-brown. Tail, excepting the two middle feathers, umber-brown edged with wood-brown, most distinct on the outer vane of the outermost feather of each side, the two middle feathers intermediate between broccoli and umber-brown. Eyebrows white; eyes light chesnut; ear coverts between orpiment and orange-red. Bill yellowish brown, shaded on the culmen with brownish red. *Tarsi* and toes sienna-yellow, brightened with flesh-red.

MIRAFRA AFRICANOIDES.

FORM, &c.—Figure moderately stout. Bill conical, strong, and rather elongated; the nostrils uncovered. Wings rounded, and when folded, reach to the last third of the tail, the third, fourth, and fifth quill feathers equal and longest, the second a little shorter than the third, the first about an inch and a half shorter than the second. Tail even, or slightly emarginate. Legs and toes robust; the *tarsi* anteriorly and posteriorly scutellated; claws of anterior toes short, rather strong, and slightly pointed; the claw of hinder toe slender, slightly curved, and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the <i>tarsi</i>	1	1
the tip of the tail	6	0	of the outer toe	0	2½
of the bill	0	6½	of the middle toe	0	4¼
of the wings when folded . . .	3	6	of the inner toe	0	2½
of the tail	2	6	of the hinder toe	0	2
			of the claw of hinder toe . . .	0	4

The *female* is coloured like the male, only the tints are less bright.

Specimens of this bird are occasionally to be procured to the south of the Orange River, but most readily on the arid open plains which lie between that river and the tropic of Capricorn.

The colours of the primary and secondary quill feathers, and their distribution, are the same in this and the last described species; but in other respects the differences are palpable. The present species, besides being considerably smaller than the last described, has longer wings in proportion to its size, and a shorter, stronger, and more conical bill. The colours of the under parts, as well as of the tertiary quill feathers and the outer vane of the outermost feather of each side of the tail, are very different.



1. *SPARROW SALOT.*
2. *SPARROW CHENTANA.*
(Wes. 11169)

MIRAFRA SABOTA.—SMITH.

AVES.—PLATE LXXXIX, FIG. 1. (FEMALE.)

M. supra fusca, plumis ferrugineo-marginatis; infra rubro-alba, pectore lateribusque rubro-aurantio-tinctis; gutturi imo pectoreque fusco-conspersis; alis fuscis, pennis rufo-marginatis; rectricibus, duabus mediis exceptis, profunde fuscis rufo-albo-marginatis, duabus mediis rubro-brunneis rubro-aurantio-marginatis; mandibulâ superiore apiceque inferioris rubro-brunneis, hac versus basin subflavâ; pedibus subflavis carneo-tinctis.

LONGITUDO e rostri apice ad basin caudæ 3 unc. 10 lin.; caudæ 2 unc. 3 lin.

COLOUR.—The feathers of the upper surface of the head, of the back and sides of the neck towards the body, of the interscapular region, and of the back and rump umber-brown, broadly edged and tipped with clear reddish orange, fading at their margins into rusty white or pale wood-brown; the feathers of the back and sides of the neck, towards the nape, umber-brown, narrowly edged and tipped with rusty white or cream yellow. The chin, throat, breast and belly rusty white, the former and the flanks tinted more or less strongly with reddish orange, and the breast, and the lower part of the throat, mottled with umber-brown stripes; thighs pale reddish orange. The lesser wing coverts, the primary and secondary quill coverts, and the tertiary quill feathers, umber-brown, broadly edged and tipped with a colour intermediate between orpiment and reddish orange, which tint, in many of the feathers, fades at the very edges into sienna-yellow or rusty wood-brown; the primary and secondary quill feathers intermediate between broccoli and reddish brown, the primaries, towards the base and at the point, narrowly edged externally with wood-brown, the secondaries edged externally throughout and tipped with sienna-yellow or rusty white, the inner vanes of both, towards the quills, pale pearl-grey. The two middle tail feathers reddish brown, edged and tipped with rusty reddish orange, the rest of the tail feathers umber-brown, narrowly edged and tipped with wood-

MIRAFRA SABOTA.

brown, the edging of the outermost feathering of each side broadest, and of a rusty tint. Eyebrows and under eyelids pale cream-yellow; ear coverts dull reddish orange, tinged with reddish brown. Bill, upper mandible and tip of lower, light reddish brown, rest of lower sienna-yellow. Legs, toes, and claws sienna-yellow, tinted with flesh-red; claws faintly shaded with light reddish brown.

FORM, &c.—Figure moderately robust. Head small; bill moderately long and subconical, the culmen considerably curved towards the tip. Wings rounded, and when folded reach to the commencement of the second half of the tail, third, fourth, and fifth quill feathers nearly equal and longest, second a little shorter than the third, the first rudimentary; the tertiary quill feathers nearly as long as the primaries, and longer than the secondaries. Tail even, or in the slightest degree rounded. *Tarsi* and toes robust, the latter anteriorly and posteriorly scutellated; claws of the front toes short, strong, and slightly curved; claw of the hinder toe long, rather slender, and slightly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	0
the tip of the tail	6	1	of the outer toe	0	3 $\frac{1}{4}$
of the bill	0	7 $\frac{1}{2}$	of the middle toe	0	5 $\frac{1}{2}$
of the wings when folded . . .	3	3	of the inner toe	0	3 $\frac{1}{4}$
of the tail	2	3	of the hinder toe	0	3
			of the hinder claw	0	3 $\frac{1}{2}$

The *male* is coloured like the female, only the tints are clearer.

This lark was procured on the arid Karroo plains north of Latakoo, and was found in tolerable abundance towards the tropic of Capricorn. It was generally observed in localities abounding with small shrubs, on which it was frequently observed to perch, particularly in the early part of the morning, when it was in the habit of practising, like its congeners, vertical flights into the air. It whistles occasionally, especially when perched upon the underwood; but there is nothing in its note to attract attention.

This species, in point of size, resembles *Mirafra Africanoides*, but is readily distinguished from it by its not having the quill feathers broadly edged with reddish orange.

MIRAFRA CHENIANA.—(MALE.)

AVES. PLATE LXXXIX. FIG. 2.

M. suprà fusca, plumis rufo-albo-marginatis; infrà rufo-alba, gutturi imo pectoreque fusco notatis; remigibus rubro-aurantio-marginatis; rectricibus duabus externis rufo-albis, fusco-variegatis; rostro suprà brunneo-rubro, subtus subflavo; pedibus subflavis carneo-tinctis.

LONGITUDO e rostri apice ad basin caudæ 3 unc. $4\frac{3}{4}$ lin.; caudæ 1 unc. $11\frac{1}{4}$ lin.

COLOUR.—MALE.—The upper surface of the head intermediate between liver and umber-brown, all the feathers edged with rufous white; back and sides of neck dull umber-brown, each feather edged either with rusty white or wood-brown; interscapulars, back, and rump umber-brown, the feathers edged and tipped with greyish white, tinted with pale reddish orange. Chin and throat white, speckled with umber-brown; breast and flanks pale reddish orange, the former variegated with short umber-brown stripes; middle of belly and vent cream-yellow; under tail coverts white. The lesser wing coverts, the primary and secondary quill coverts, and the tertiary quill feathers umber-brown, edged and tipped with a colour intermediate between orpiment and reddish orange, the very tips of the feathers nearly pure white; primary and secondary quill feathers intermediate between reddish and broccoli-brown,—the outer vanes of the primaries towards the base and the whole length of the secondary edged like the quill coverts, and all more or less completely tipped with white; the inner edges of inner vanes towards base light cream-yellow. The two middle tail feathers the colour of the primary quill feathers, narrowly edged with rusty white, the three next on each side umber-brown, the outermost one distinctly edged with white; the two outermost of each side white, with more or less of the inner edges of inner vanes umber-brown. Eyebrows sienna-yellow; ear coverts pale reddish orange, tinted with umber-brown. The upper mandible deep brownish red, lower mandible sienna-yellow. Legs, toes, and claws pale buff orange, tinged with flesh-red.

MIRAFRA CHENIANA.

FORM, &c.—Figure rather robust. Head small; bill short, stout, conical, and pointed, the culmen arched from the base. Wings rounded, and when folded reach beyond the commencement of the second third of the tail, the third, fourth, and fifth quill feathers equal and longest, the second slightly shorter, and the first rudimentary; the tertiary quill feathers nearly as long as the primaries, and rather longer than the secondaries. Tail even, or very slightly rounded. *Tarsi* short and rather strong, anteriorly and posteriorly scutellated; toes moderately long and rather slender; the claws of the fore toes short, slender, and slightly curved, the claw of the hinder toe rather long, strong, and nearly straight.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	9
the tip of the tail	5	4	of the outer toe	0	3 $\frac{1}{2}$
of the bill	0	5	of the middle toe	0	5
of the wings when folded . . .	2	10	of the inner toe	0	3 $\frac{1}{2}$
of the tail	1	11 $\frac{1}{4}$	of the hinder toe	0	3
			of the claw of hinder toe . . .	0	4

A second adult specimen of this species was obtained, but its sex was not recorded. In size it was rather superior to the male specimen just described, and the feathers of the upper parts are broadly edged with a colour intermediate between orpiment and reddish orange; the latter colour on the breast is also much darker; in other respects the two are similar.

Only a few individuals of this species were seen, and those upon the extensive grassy plains to the northward and eastward of Latakoo. It is a species which seems to prefer situations which abound in long and rank grass, among which it runs like the quail, and flies like it when disturbed to a short distance, and then suddenly descends, after which it cannot again be got to take wing unless by the aid of dogs. It feeds upon seeds and small insects.



1 CERTHILAUDA AFRICANA .
2 CERTHILAUDA SUBCORONATA .
(Aves Plate 90)

CERTHILAUDA AFRICANA.

AVES.—PLATE XC. FIG. 1. (MALE.)

C. suprà griseo-brunnea, pennis griseo-albo aut rufo-albo-marginatis; subtus alba, gutture imo pectoreque brunneo-conspersis; remigibus flavo-brunneis, externe flavo-marginatis; rectricibus griseo-brunneis externe rufo-albo-marginatis; rostro flavo-brunneo, brunneo-umbrato; pedibus subflavis carneo-tinctis; unguibus flavo-brunneis, brunneo-tinctis.

LONGITUDO è rostri apicè ad basin caudæ 5 unc. ; caudæ 3 unc. 3 lin.

ALAUDA AFRICANA, Vieill. Encyclop. Method.

L'ALOUTETE SERLI, Le Vaillant Ois. d'Afriq., pl. 192.

COLOUR.—The upper surface of the head between umber and liver-brown, the feathers all edged and tipped with pale wood-brown. The back and sides of neck dirty pale umber-brown, the feathers edged and tipped with wood-brown. The interscapulars, back, rump, and upper tail coverts liver-brown, the feathers edged with pale reddish orange, and tipped with white. The under parts pure white, with the lower portion of the throat, the flanks and the breast variegated with short, broad umber-brown streaks, and the belly, and under tail coverts, with lengthened narrow umber-brown lines; thighs rusty white. The lesser wing coverts and the primary and secondary quill coverts umber-brown, edged and tipped with white; primary and secondary quill feathers shining yellowish brown, the outer vanes particularly towards the quills very narrowly edged with white; tertiary quill feathers a greyish liver-brown, edged and tipped with wood-brown. Tail umber-brown, glossed with grey, and the outer vanes, particularly of the two external feathers of each side, edged and tipped with white, the grey strongest on the two middle feathers. Eyebrows white; eyes dark brown; bill yellowish brown, shaded with umber-brown; legs and toes clear buff-orange, tinted with flesh-red; claws yellowish brown, shaded with umber-brown.

FORM, &c.—Figure rather robust. Head small; bill long and slightly arched,—the arch greatest towards the point; wings rounded, and when folded, reach to the commencement of the second half of the tail, the third

CERTHILAUDA AFRICANA.

quill feathers the longest, the fourth slightly shorter than the third, the fifth rather shorter than the fourth, the second considerably shorter than the fifth, and the first not half the length of the second. Tail even, or very slightly emarginate. Tarsi and toes robust, the former anteriorly and posteriorly scutellated ; claws of fore toes rather slender, short, and curved, the claw of hinder toe very long, strong, and nearly straight,

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	3
the tip of the tail	8	3	of the outer toe	0	4
of the bill	1	3	of the middle toe	0	7
of the wings when folded . . .	4	3	of the inner toe	0	4 $\frac{1}{2}$
of the tail	3	3	of the hinder toe	0	4
			of the claw of hinder toe . . .	0	6

The female is coloured like the male.

Specimens of this species abound in the immediate vicinity of Cape Town, and are partial to localities whose soil is loose and sandy. They seek their food among the brushwood with which the parts they inhabit are generally more or less covered ; and when not so occupied, are fond of resting upon small hillocks, or even upon the tops of shrubs. According to Le Vaillant, this bird lays from three to five eggs, of a dirty grey colour, dotted with fulvous, and makes its nest on the ground at the base of a bush, constructing it of dry herbs, and lining it with feathers.

CERTHILAUDA SUBCORONATA.—SMITH.

AVES.—PLATE XC.—FIG. 2.

C. *suprà* rufa, brunneo-strigata; *infra* rufo-alba; gulâ, gutture, pectore, ventre anticè lateribusque fusco-virgatis; remigibus rectricibusque griseo-brunneis, flavo-brunneo-marginatis; palpebris rufo-albis, elongatis usque ad nuham; pedibus rubro-flavis, carneo-tinctis; rostro brunneo, rubro-fusco umbrato.

LONGITUDO e rostri apice ad basin caudæ 5 unc. 4 lin.; caudæ 3 unc. 2 lin.

COLOUR.—The upper surface of the head, the interscapulars, and the back intermediate between orpiment and reddish orange, and profusely mottled or streaked with liver-brown, the central portion of each feather being of the latter colour; the back and sides of the neck dull wood-brown, variegated with umber-brown spots. The lesser wing coverts pale orange-coloured brown, with a liver-brown line in the course of the shaft, and tipped with white. The primary and secondary quill coverts, and the primary, secondary, and tertiary quill feathers greyish brown, the quill coverts narrowly edged with pale yellowish brown, and tipped with white; the primary quill feathers narrowly edged and tipped with light yellowish brown, the secondaries edged with rusty white and tipped with pure white, and the tertiaries edged and tipped with wood-brown. Chin and throat white, finely mottled with short, dull, umber-brown streaks; breast, anterior part of belly and flanks dull sienna-yellow, variegated with narrow umber-brown streaks arranged in irregular rows; hinder portion of belly, vent and under-tail coverts rusty white, the latter each with a yellowish brown streak in the course of the shaft. Tail feathers greyish brown edged and rather broadly tipped with sienna-yellow, in some places tinted with Dutch-orange. Eyebrows rusty white, and prolonged so as nearly to meet on the nape. Legs and toes pale buff-orange with a flesh tint. Bill light brownish red, shaded with umber-brown. Eyes chesnut-brown.

CERTHILAUDA SUBCORONATA.

FORM, &c.—Figure rather slender. Head small, and above very flat. Bill subtriangular towards the base, and slightly convex on the sides towards the point; the culmen is slightly curved from the base to the point, and the lower mandible is also arched in the same proportion; point of bill rather flat and subacute. Wings rounded, and when folded reach beyond the commencement of the second third of the tail, the third quill feather the longest, the second, fourth and fifth equal, and rather shorter, the first about half the length of the second. Tail square or very slightly rounded. *Tarsi* robust, and anteriorly and posteriorly scutellated: toes strong, moderately long, the hinder one shortest. Claws of the toes directed forwards, slender, pointed and slightly arched, the claw of the hinder toe long, strong, straight and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	4
the tip of the tail	8	6	of the outer toe	0	4½
of the bill	1	4	of the middle toe	0	6½
of the wings when folded . . .	4	6	of the inner toe	0	5
of the tail.	3	2	of the hinder toe	0	3
			of the claw of hinder toe . . .	0	7½

The differences of colour in the sexes (if any exist) are not known to me.

The few specimens of this species which have come under my observation, were procured from the arid *Karoo* plains of the middle and eastern districts of the Cape Colony. On examining them I was at first disposed to regard them as a variety of *Certhilauda Africana*; but on perceiving the extension of the eyebrows, the greater length of the bill, and its more falciform shape, I began to suspect them to belong to a distinct species; and when all the differences between them and the common species were noted and considered, I came to the conclusion to view them as being specifically different.



ARDEA GUTTURALIS
(Aves - Plate 91)

ARDEA (ARDEOLA) GUTTURALIS.—SMITH.

AVES.—PLATE XCI. (MALE.)

A. suprà nigro-purpurea viride-lævigata; gulâ guttureque rufo-albis latè nigro-brunneo-lineatis; pectore regioneque ante alas subochreis, nigro-brunneo-virgatis; ventre brunneo-flavo, nigro-brunneo-virgato; rostro subviride-fusco umbrato; tarsis anticè flavo-virescentibus, posticè ochreis; oculis brunneo-aurantiis.

CANCROPHAGUS GUTTURALIS, *Smith*, Rep. of Exped. App. page 57.

COLOUR.—The upper and lateral parts of the head, neck, and body, also the wings and tail pale blackish purple, and all, except the quill feathers, distinctly glossed with green; the primary and secondary quill coverts narrowly tipped with white. Chin and throat dirty white, and variegated with large blackish-brown stripes so arranged as to form three more or less distinct longitudinal lines; the breast and sides of neck immediately in front of shoulders sienna-yellow, blotched with brownish black stripes; belly yellowish brown, variegated with lengthened longitudinal blackish brown stripes; flanks the same colour as the back. Eyes brownish orange. Base of upper mandible and most of lower mandible oil-green; the remaining parts dull umber-brown. *Tarsi* anteriorly oil-green, posteriorly ochre-yellow; toes ochre-yellow, tinged with oil-green.

FORM, &c.—Figure rather slender. Feathers of neck rather long, wiry, and decomposed; sides of head in front of eyes bare; bill rather compressed, conical, and pointed. Wings inclined to pointed, and when folded reach nearly to the tip of the tail; the tertiary quill feathers nearly as long as the primaries, the first and second primary quill feathers equal and longest, the third rather shorter. Tail short, and slightly rounded. *Tarsi* rather short, anteriorly scutellated, posteriorly coated with several series of small scales; toes long, and moderately strong; claws rather strong, slightly curved, and pointed.

ARDEA (ARDEOLA) GUTTURALIS.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus		
the tip of the tail			of the outer toe		
of the bill			of the middle toe		
of the wings when folded . . .			of the inner toe		
of the tail			of the hinder toe		

The colours of the female not known.

This little Heron is seldom procured, and I doubt if more than two specimens have yet fallen into the hands of the Naturalist. One of the two was shot near to Cape Town, and the other was procured during the movements of the Expedition party between the principal branches of the Orange River. Both were discovered near marshy grounds, and the one which was procured in the locality last stated was shot while perched upon the top of a dwarf tree. The remains of *crustaceæ* were found in its stomach.



FALCO RUPICOLoidES
(Aves Plate 92)

FALCO RUPICOLOIDES.—SMITH.

AVES.—PLATE XCII. (FEMALE.)

F. subrufus, lineis fasciisque brunneis variegatus, fasciis postice acuminatis; gulâ guttereque rufo-albis; caudâ alterne albo brunneoque fasciatâ; oculis brunneis; pedibus viridi-flavis; unguibus corneis; maxillâ livido-viride; mandibulâ versus basin flavâ.

LONGITUDO è rostri apicé ad basin caudæ 10 unc. ; caudæ 7 unc.

FALCO RUPICOLOIDES, *Smith*, South African Quarterly Journal, vol. i. p. 238, 1830.

COLOUR.—The upper parts of the head and neck, the interscapulars, the back, the breast, and the belly, have a ground tint intermediate between light-tile red and buff-orange, the shade deepest on the upper parts of the head, the back and sides of the neck, the back and the belly. In these several regions, however, the ground colour is broken by umber-brown variegations, in the form of narrow longitudinal stripes on the head, the back and sides of the neck, the breast, and the flanks; and of transverse bars on the back, the belly, the shoulders, the scapulars, and the quill coverts. On the back, shoulders, and belly, the bars amount to two or three on each feather, and many of them posteriorly exhibit a single fine prolongation following the course of the vane. The longitudinal stripes, where they occur, are one along the middle of each feather. The primary and secondary quill feathers are deep umber-brown, the inner vanes barred with reddish orange, which fade into white towards their inner edge. Upper tail coverts umber-brown, barred with white; under tail-coverts nearly white. Tail barred, alternately rusty white and umber-brown, with a greyish gloss, the dark bars widest, the light-coloured bars of the two centre feathers are strongly tinted with rufous; the tips of all the tail feathers are white. The sides of the head behind the eyes, the chin, the

FALCO RUPICOLOIDES.

throat, and the thighs pale buff orange, and almost destitute of variegations. Legs and toes yellow with a faint greenish tint. Upper mandible livid green towards base, towards tip umber-brown; lower mandible yellow, towards base, livid-green towards tip, cere-yellow. Eyes brown. Claws a dark horn colour.

FORM, &c.—Figure robust; head rather small, culmen arched from the base; the point of the upper mandible acute; tooth triangular, and well developed; the cutting edge of upper mandible posterior to tooth slightly waved; cere small; nostrils circular and open. Wings long, pointed, and when folded reach very nearly to the tip of the tail; the second quill feather the longest, the third rather shorter, the first and fourth equal and about an inch shorter than the second. Tertiary and secondary quill-feathers nearly of equal length, and much shorter than the primaries. Tail slightly rounded. Tarsi and toes moderately strong, the former coated anteriorly with rather large umbricate scales, posteriorly with small ones; the middle toe considerably longer than the lateral toes; claws long, slender, much curved, and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus.....	1	10
base of the tail	10	0	of the outer toe.....	0	9½
of the tail	7	0	of the middle toe	1	2
of the bill to the angle of the			of the inner toe.....	0	10
mouth	0	11	of the hinder toe	0	6½
of the wings when folded	11	6			

Male.—The colours the same as those of the female, only clearer and deeper.

Specimens of this bird have occasionally been procured in the neighbourhood of Cape Town, but they are only to be obtained in abundance on the west coast of the Colony, towards the mouth of the Orange River, and in the interior of the country to the northward of that stream. In the districts in which it is common it seems to take the place of *Falco Rupicolus*, so common in the Colony, at least according to my observations; the last named is rarely observed where *Falco Rupicoloides* is common. Both species are in the habit of resting upon trees, but there is a marked difference in the practice of the two; *Falco Rupicolus* seems to prefer rocks to trees as a resting-place, while *Falco Rupicoloides* never perches on rocks. Both species build their nest on trees, and both subsist on the same kind of food.



ACCIPITER RUFIVENTRIS. (A. & B. Males. C Female)
(Aves. Plate 93.)

ACCIPITER RUFIVENTRIS.—SMITH.

AVES.—PLATE XCIII.—(MALE AND FEMALE.)

Mas.—A. supernè brunneus griseo-tinctus; infra rufo alboque nebulatus; plumis scapularibus albo-maculatis; rectricibus interne versus basin albo, brunneoque variàtis; caudâ, alternè pallide rufo brunneoque fasciatâ; pedibus viridi-flavis; oculis flavis.

LONGITUDO 13 unc. 2 lin.

Fem.—A. supernè brunneus, griseo-tinctus; infra albus strigis longitudinalibus, fasciolisque transversis variegatis.

LONGITUDO 17 unc. 2 lin.

ACCIPITER RUFIVENTRIS, *Smith*, South African Quart. Journal, Vol. i. p. 231, 1830.

FALCO EXILIS, *Temm.* Planch color, 496.

COLOUR.—*Male*.—The upper parts of the head and neck, the interscapulars, the back, the upper tail coverts, and lesser wing coverts of a tint intermediate between brocoli-brown and brownish red, all faintly glossed with lavender purple, the gloss most distinct on the head, neck, and interscapulars; the lesser wing coverts are narrowly edged with pale reddish orange. Ear coverts, lower portion of throat, breast, belly, vent, and thighs, mottled rusty reddish orange and white, and each of the breast feathers has a narrow brown line in the course of the shaft, and indistinct narrow brown bars on the vanes; upper portion of throat and sides of neck behind and below ear coverts white. Primary and secondary quill feathers brownish red, the inner vanes towards quills barred-white and liver-brown, towards tips with liver-brown only; the scapulars and tertiary quill feathers marked with incomplete white bars in the form of broad irregular blotches, portions of which become visible when the feathers are deranged. Tail above barred, alternately rusty brocoli-brown and liver-brown, the bars of the latter colour six in number; the tips of all the feathers rusty white; under tail coverts white. Tarsi and toes greenish yellow; claws brownish red. Bill,—upper

ACCIPITER RUFIVENTRIS.

mandible towards base a light horn colour, towards and at tip liver-brown, its edge below and in front of nostrils greenish yellow; lower mandible below and at base greenish yellow,—elsewhere liver-brown. Cere greenish yellow. Eyes bright yellow.

Female.—Upper parts, wings, under tail coverts, and tail, coloured as in the male. Sides of neck, lower portion of throat, breast, belly, vent, and thighs white; each of the feathers of the sides of the neck marked with a narrow longitudinal brown line, those of the breast, belly, vent, and thighs with a similar line, and besides with several narrow waved yellowish brown bars, irregularly edged with brownish red. The colours of the tarsi, toes, claws, bill, cere, and eyes, as in the male.

FORM, &c.—Figure moderately slender and like that of the Sparrow Hawk (*Accipiter Nisus*) of Europe. Upper mandible strongly hooked, nostrils oblong and suboval, bristles at angles of mouth many and rigid. Wings when folded reach nearly to the middle of the tail, the fourth quill feathers the longest, the fifth nearly of equal length, the third slightly shorter and rather longer than the sixth, the second and seventh nearly equal, and about an inch shorter than the third, the first about half the length of the fourth. Tail nearly even, or only very slightly rounded. Tarsi long and slender, anteriorly scutellated, posteriorly reticulated. Toes long and rather slender, the inner one much the shortest, the outer and middle ones connected at base by a well developed membranous web. Claws long, slender, considerably curved, and sharp pointed.

DIMENSIONS.

	MALE.		FEMALE.			MALE.		FEMALE.	
	In.	Ls.	In.	Ls.		In.	Ls.	In.	Ls.
Length from the point of the bill to the base of the tail	7	0	8	6	Length of the tarsus.....	1	9	2	0
of the bill to the angle of the mouth	0	8	0	10	of the outer toe.....	0	10	0	11
of the wings when folded	8	0	8	8	of the middle toe	1	4	1	4½
of tail.....	6	2	7	4	of the inner toe.....	0	7	0	7½
					of the hinder toe	0	6	0	6½

The individual represented in the plate and lettered C, is of the same species but of a different age from the other two. The character of its colouring would indicate it as the adult bird, and if such be the case, the others must be regarded as not exhibiting the mature plumage. It is of the

ACCIPITER RUFIVENTRIS.

same size and figure as the male, lettered A, and already described ; the colours are as follow :—

The upper parts, comprising the head, neck, interscapular, back, upper tail coverts, and lesser wing coverts, intermediate between brownish red and lavender-purple, to which is superadded a distinct gloss of the latter ; the shoulder feathers are faintly edged with pearl-grey. The quill and scapular feathers coloured as in the specimens already described. The bars of the tail, so far as the numbers are concerned, are also similar, but the light coloured ones have superiorly a greyer tint, and the portion of shaft between them is of a clearer white. The ear coverts, sides of the neck, lower part of the throat, breast, belly, and thighs, clear reddish orange, without variegations ; upper parts of throat yellowish white ; under tail coverts pure white. Colour of legs, toes, claws, bill, and eyes, as in the specimens described.

This species occurs, though sparingly, in all parts of the Colony, and specimens are not uncommon near to Cape Town and towards the sources of the Great Fish river. It resembles in its habits the common Sparrow Hawk, and its chief food consists of small quadrupeds and birds. The majority of the specimens which I have had the opportunity of examining, exhibited the colours of the specimen lettered C.



TELOPHONUS TRIVIRGATUS (female).
Scale 1/4

TELOPHONUS TRIVIRGATUS.—SMITH.

AVES.—PLATE XCIV. (FEMALE.)

T. *superne olivaceus flavo-brunneo tinctus, inferne subochreus griseo tinctus; superciliis flavo-albis, strigâ nigrâ superne inferneque marginatis; humeris, remigibus primariis, secundariisque externe cinnamomeis; caudâ graduatâ, rectricibus nigris albo-terminatis.*

LONGITUDO è rostri apicè ad basin caudæ 3 unc., 6 lin.; caudæ 4 unc.

COLOUR.—Above light hair-brown tinged with yellowish brown, the colour darkest on the top of the head and upper parts of the neck; sides of head below eyes yellowish grey dulled with brown; eyebrows cream-yellow margined superiorly and inferiorly with deep shining black. Under parts wood-brown, darkest towards the tail, the upper parts of the throat nearly white; shoulders, quill coverts, and outer vanes of primary and secondary quill feathers, reddish orange dulled with brown; tertiary quill feathers and inner vanes of primaries and secondaries brownish red; the tertiaries narrowly edged with pale reddish orange. Tail feathers black, broadly tipped with white*; upper tail coverts light sienna-yellow. Bill,—upper mandible pale orange coloured brown shaded with brownish red; lower mandible wine-yellow with a flesh coloured tint. Tarsi and toes pale brownish red, and each of their scuta margined inferiorly with livid wine-yellow. Claws, wood-brown, shaded with brownish red. Eyes deep reddish brown.

FORM, &c.—Figure rather slender; feathers generally soft and silky. Bill short, strongly compressed, and the upper mandible moderately hooked at the point; the tooth slightly developed; culmen rather rounded and arched from the base which enters deeply between the feathers of forehead. Lower

* The two middle tail feathers in the specimen described are wanting, hence their colour cannot be particularized.

TELOPHONUS TRIVIRGATUS.

mandible pointed and towards the tip inclined obliquely upwards, its lower edged slightly arched; a few strong rigid bristles at the angle of the mouth. Wings roundish, very short, and when folded reach but a very short way beyond the base of the tail, the fourth, fifth, and sixth quill feathers longest and nearly equal, the third and seventh equal and slightly shorter, the second considerably shorter, and about the length of the secondaries, the first much shorter than the second. Tail long and graduated, and the feathers somewhat pointed. Tarsi short and moderately strong, anteriorly scutellated, posteriorly entire. Toes rather slender and free, the outer slightly longer than the inner one, and both considerably shorter than the middle one; hinder toe short and strong. Claws of anterior toes rather slender, pointed, and slightly curved; claw of hinder toe long, strong and much curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	0
the base of the tail	3	6	of the outer toe	0	5
of the tail	4	0	of the middle toe	0	6½
of the bill to the angle of the			of the inner toe	0	4½
mouth	0	9½	of the hinder toe	0	3½
of the wings when folded . . .	3	0			

Male.—Colours not known.

The only specimen of this species which I have seen was shot to the northward and eastward of Kurrichane between 24° and 25° south latitude. During the time which elapsed from its being observed till it was killed, it flitted about with great celerity from twig to twig, and from bush to bush, but manifested no inclination or intention of leaving the dense thicket in which it was discovered. Its food was found to have consisted of insects, and in that respect as well as in its manners generally, it had a marked resemblance to *T. erythropterus* and *longirostris*, the two species of the genus which are not uncommon in certain districts of the Cape colony.



AMADINA SQUAMIFRONS
(Aves. Plate 95.)

AMADINA SQUAMIFRONS.—SMITH.

AVES.—PLATE XCV. (FEMALE.)

A. capite antice, tectricibus primariis et secundariis, remigibus, rectricibusque nigris albo-marginatis; loris, gulâ lineisque duabus è mandibulæ base nigris; collo superne dorsoquè pallidé griseo-brunneis; partibus inferioribus albis.

LONGITUDO ab apicè rostri ad basin caudæ 2 unc. 6 lin.; caudæ 1 unc. 9 lin.

COLOUR.—The feathers of the forehead and top of the head, the quill coverts, the tertiary quill feathers, and the tail feathers, liver-brown, margined with clear white; the sides of the head behind the eyes, the back and sides of the neck, the back and the upper tail coverts, intermediate between broccoli and wood-brown; lores, space between rami of lower mandible, and a stripe on each side of throat from base of bill liver-brown, the latter separated from the light colour of the side of head by a clear white stripe; throat, and under parts, dusky white. Legs and toes light yellowish brown. Bill, light greenish yellow. Eyes dark brown.

FORM, &c.—Figure rather slender. Head small; bill conical and pointed, the upper mandible entering deeply between the feathers of the forehead. Wings rounded, and when folded reach to the last third of the tail, the third and fourth quill feathers equal and longest, the second slightly shorter, the first rudimentary. Tail rather long and slightly rounded. Tarsi short and rather slender, anteriorly scutellated, posteriorly entire. Claws slender, considerably curved and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	6½
the base of the tail	2	6	of the outer toe	0	2½
of the bill from the angle of			of the middle toe	0	4½
the mouth	0	5	of the inner toe	0	2½
of the wings when folded . . .	2	5	of the hinder toe	0	2½
of the tail	1	9			

AMADNIA SQUAMIFORMIS.

Male.—Colours similar to those of the female, only rather clearer and brighter.

This bird is frequently found to the northward of Latakoo, but rarely to the southward; and the only specimens I have seen from the latter were obtained towards the sources of the Great Fish River. It is generally observed among brushwood, especially in the vicinity of streams or cultivated grounds. In a few instances I have observed several individuals associated together, but more generally only two or three are found in the same locality. It feeds upon seeds, constructs its nest of grass, and builds it on a small shrub.



ANAS PLATYRHYNCHOS
Aves, Plat. 10

ANAS FLAVIROSTRIS.—SMITH.

AVES.—PLATE XCVI. (MALE.)

A. superne brunneus, plumis albo-marginatis; inferne rufo-albus lunulis brunneis variegatus; alarum speculo viridi-splendente antice, postice interneque nigro, marginato; rostro superne flavo, maculo oblongo nigro-brunneo e fronte usque ad apicem; pedibus rubro-brunneis.

LONGITUDO e rostri apice ad basin caudæ 19 unc. 6 lin.; caudæ 4 unc.

ANAS FLAVIROSTRIS, Smith, Eyton's Monograph on the Anatidæ, p. 141, Lond. 1838.

COLOUR.—The upper surface of the head and the lores deep umber-brown freckled with short and fine longitudinal dull white lines arising from each feather being narrowly edged and tipped with that colour; sides of head and neck dull broccoli-brown, finely streaked with dirty white; interscapulars, scapulars, back, and upper tail coverts intermediate between umber-brown and brownish red, each feather broadly margined with dirty white; breast, belly, and under tail coverts mottled brown and dirty white. The brown is nearly of the same tint as that of the back, and is the predominating colour of each feather, the white existing only at the edges and in the form of an angular and incomplete bar about midway between the base and apex of each. Shoulder feathers and secondary quill coverts greyish brown, a part of the former narrowly edged with pale broccoli-brown, the other part with dull white; the secondary quill coverts are tipped with velvet black, behind which each has a narrow bar of white. Primary quill coverts reddish brown, faintly edged exteriorly and tipped with greyish white. Primary quill feathers light brownish red, tinted with grey, the outer vanes darkest and narrowly edged with yellowish white; shafts deep brownish red. Secondary quill feathers brownish red, broadly tipped with white, and behind the white each has a broad bar of velvet black, the outer vanes from near the quills to the last mentioned bar are a brilliant shining duck green. The innermost of the secondary and the outermost of the tertiary quill feathers have the outer vanes velvet-black, so that three sides of the wing-speculum are bounded with that colour; the rest of the tertiaries are of the same colour as the back and are narrowly edged with dirty white. Tail intermediate between umber-brown and brownish

ANAS FLAVIROSTRIS.

red, all the feathers narrowly edged and tipped with dirty white. Bill—upper mandible and the lower towards tip gamboge-yellow,—the former with an oblong liver-brown stripe extending from its base to within less than an inch of its point, in which are situated the nostrils ; the nail and tip of upper mandible and a triangular block at the corresponding part of the lower liver-brown. Legs, toes, and webs brownish red.

FORM, &c.—Body moderately robust ; head large and slightly compressed. Wings pointed, and when folded reach rather beyond the first half of the tail, the second feather rather the longest, the first and third equal and rather shorter, the fourth a little shorter than the third and about the same length as the tertiary quill feathers. Tail rigid and slightly rounded, the feathers pointed. Bill rather long, narrow, and throughout of the same width. Tarsi and toes moderately long and rather slender, the former laterally and posteriorly covered with small reticulated scales, anteriorly with small transverse plates ; the web between the toes reaches to the base of the claws, and on each side of the middle toe is covered with a few rows of small scales. Claws slightly curved and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	6
the tip of the tail.....	23	6	of the outer toe	1	10½
of the bill to the angle of the			of the middle toe	1	11½
mouth	2	7½	of the inner toe	1	5
of the wings when folded.....	10	6	of the hinder toe	0	4
of the tail.....	4	0			

Female.—Colours like those of the *male*, only not quite so dark ; the wing speculum has less lustre, and her size is inferior.

Of all the South African ducks this is perhaps the most common and widely diffused. Near Cape Town it occurs in the marshes, on the small lakes, and about the banks of the various streams. In the interior again, it is generally found on the comparatively stagnant portions of rivers, probably from the circumstances that the other collections of water in which it more particularly delights exist only in but a few localities.



ANAS SPARSA
(Aves—Plate 97)

ANAS SPARSA.—SMITH.

AVES.—PLATE XCVII. (MALE.)

A. brunneo-rubra, plumis subalbo-marginatis; pennis scapularibus remigibusque internis albo-maculatis; rostro superne cæruleo-griseo, medio versus basin ungueque nigris; pedibus flavis.

LONGITUDO e rostri apice ad basin caudæ, 17 unc. 3 lin.; caudæ, 4 unc. 9 lin.

ANAS SPARSA, Smith, Eyton's Monograph on Anatidæ, p. 142, Lond. 1838.

COLOUR.—Head, neck, breast, belly, and vent dull brownish red, the feathers of the top of the head, upper part of neck, breast, belly, and vent narrowly edged with dirty white; those of the sides of the head and neck, and of the upper part of the throat, broadly edged with rusty white, and from the light edges being more exposed to view than the brown, the colour of these parts is comparatively light. Under tail coverts tipped with rusty white and broadly barred with pure white; interscapulars, back, rump, upper tail coverts, shoulder coverts, primary and secondary quill coverts, scapulars, and tertiary quill feathers umber-brown, the two latter tinted with brassy green. The interscapulars are narrowly margined with rusty white, the shoulder coverts, obscurely, with grayish white, the upper tail coverts are sparingly blotched or partially barred with rufous, and the scapulars and tertiary quill feathers are variegated with a few rufous or pure white bars, and as portions of these are always exposed to view, there appears on the sides of the back a sprinkling of irregular white spots. The tips of the secondary quill coverts are velvet black, and each of these feathers behind the black has a broad pure white bar. The base of the outer vane of secondary quill feathers and their inner vanes brown, their tips white, and behind the white a broad bar of velvet black, the rest of the outer vanes deep shining duck-green; the outer vane of the outermost tertiary quill feather is also velvet-black, so that the two extremes and the inner side of the wing-speculum are bounded by black. Primary quill and tail feather brownish red, the latter narrowly tipped with sienna-yellow, and their outer vanes partially barred with pale buff-orange. Bill,—the centre portion of the upper mandible from its base to near the nail, the latter, and a spot below each nostril, black or deep liver-brown, edges of nostrils bluish-white; the other parts of the mandible bluish-grey. Legs and toes reddish-yellow, the webs the same, and each tinted midway between the toes with dirty greyish-black; claws brownish-red. Eyes dark brown.

ANAS SPARSA.

FORM, &c.—Figure moderately robust; head compressed and superiorly rather flat; wings pointed, and when folded reach beyond the first half of the tail, the second quill feather rather the longest, the first a little shorter, the third rather shorter than the first, and the fourth about half an inch shorter than the third; the tertiary quill feathers nearly as long as the seventh quill feather,—the scapularies considerably shorter than the tertiaries. Tail rigid and slightly rounded. Bill short and moderately broad, rather deep at the base, but much depressed towards the tip. Tarsi and toes moderately long and rather strong, the former posteriorly and laterally covered with reticulated scales, anteriorly towards toes with small transverse plates, the web on each side of middle toe, and on the insides of the outer and inner toes is covered with several rows of rather large flat scales, and the parts between these scales are studded with small detached somewhat granular scales. Claws short, rather strong, slightly curved and obtuse at the point.

DIMENSIONS.

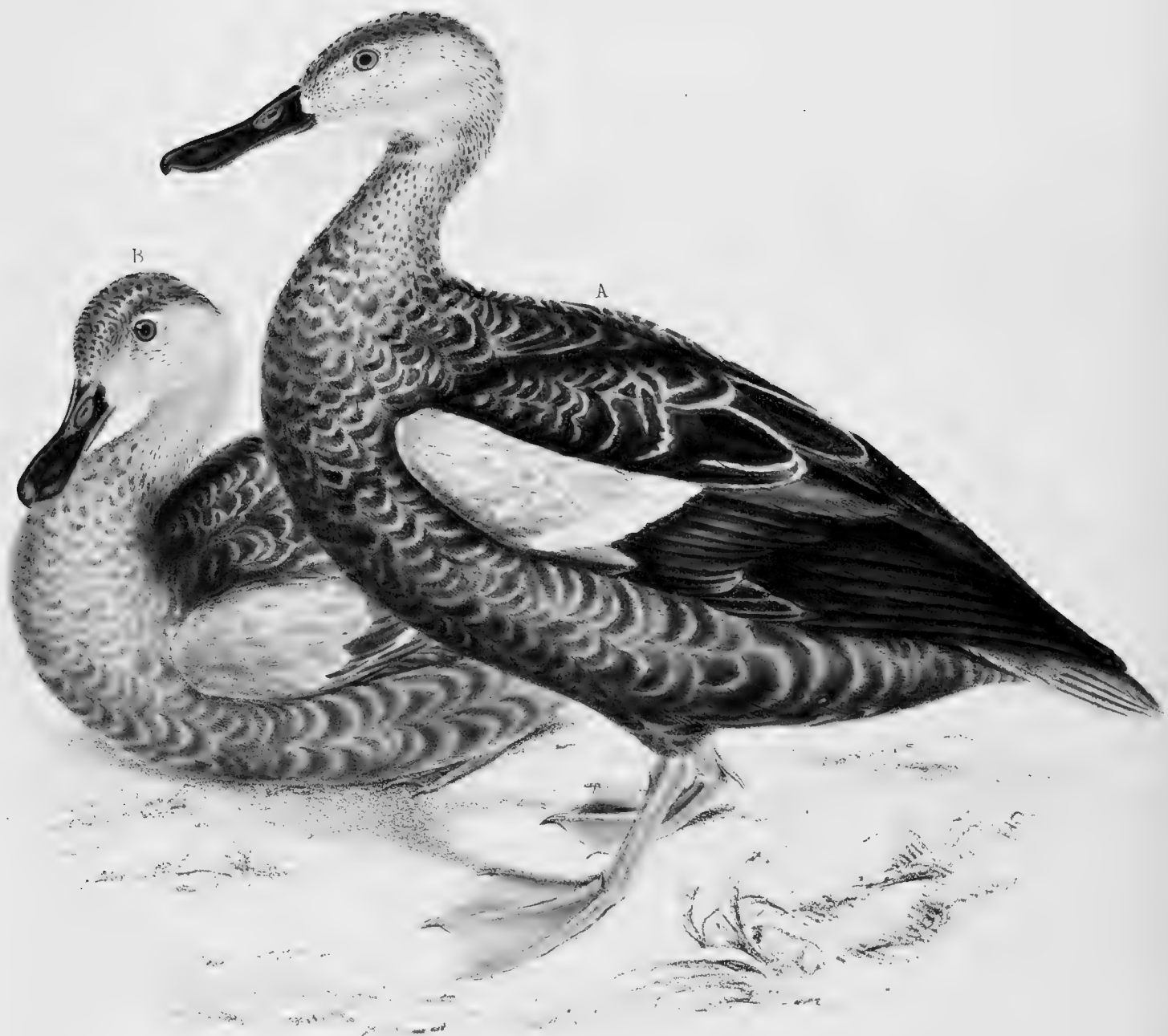
	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsi	1	8½
the tip of the tail.....	22	0	of the outer toe.....	1	11½
of the bill to the angle of the			of the middle toe	2	0½
mouth	2	3	of the inner toe...	1	6
of the wings when folded.....	11	6	of the hinder toe	0	6
of the tail	4	9			

FEMALE.—As regards colours, the two sexes are nearly alike. The female is slightly smaller than the male.

This species occurs throughout the whole of South Africa, but not abundantly in any district. It is usually found on the waters of rivers, and most commonly in localities where the banks are of a vegetable mould or where drift wood, &c., is accumulated in abundance. In these situations it seeks its food, which consists of small crustacea, &c., which are generally found abundantly in situations circumstanced as above stated.

In point of figure this differs considerably from the more typical species, its body being more depressed and broader, its wings proportionally larger, its tail longer, and the web of the hinder toe more developed. Besides differing in these respects, it also differs in some of its habits; it never congregates to form flocks, but is either observed solitary or in company with a second specimen probably of the opposite sex.

Some time ago I had an opportunity of examining a duck which was said to have been brought from Abyssinia by Ruppel, and which at the time I was much disposed to regard as identical with *Anas Sparsa*. Should such prove to be the case, I am inclined to believe it has been named and described by that celebrated traveller; hence the name which I have adopted will require to give place to that which has priority for its claim.



RYNCHASTIS CAPENSIS

Aves. — Plate 98. A Male. B Female.

RHYNCHASPIS CAPENSIS.—SMITH.

AVES.—PLATE XCVIII. (MALE AND YOUNG.)

R. superne brunneus tæniolis rufo-albis variegatis; humeris pallide cæruleo-griseis; tectricibus secundariis partim albis; alarum speculo viridi nitente; rostro superne profunde rubro-brunneo.

LONGITUDO e rostri apicè ad basin caudæ 17 unc. ; caudæ 4 unc.

RHYNCHASPIS CAPENSIS, Smith, Eyton's Monograph on Anatidæ, p. 135, Lond. 1838.

COLOUR.—The upper surface of the head dull brownish red, finely freckled or pencilled with rusty white arising from each feather being narrowly edged with the latter colour; sides of the head and upper portion of the neck rusty white, freely sprinkled with short and narrow waved brown lines. Lower portion of neck posteriorly umber-brown narrowly barred with pale buff-orange; interscapulars, back, rump, and upper tail coverts umber-brown glossed with duck-green, all the feathers variegated with one or more narrow waved bars of pale buff-orange, and also indistinctly tipped with dusky white; lower part of throat, breast, belly, and vent mottled reddish brown and pale buff-orange, the latter colour edges each feather, and also forms a transverse lunule some way behind the point. On the belly and vent the light colour, instead of being buff-orange, is often rusty reddish orange. Shoulder coverts bluish purple with a faint shade of green, and a few of them towards the point of the shoulder are narrowly barred with white. The primary and base of secondary quill coverts umber-brown, the remainder of the latter pure white, and the outer vanes of the former are narrowly edged with a faded bluish purple. Primary quill feathers and inner vanes of secondaries brownish red; outer vanes of latter shining duck-green, and indistinctly edged with bluish purple. Scapulars and outer vanes of tertiary quill feathers towards base shining blackish green, inner vanes and portion of outer vanes towards tip tinted with shining blackish green. Insides of shoulders and axillary feathers pure white. Tail feathers brownish red, narrowly and faintly edged with pale cream-yellow. Bill deep reddish brown shaded with umber-brown; nail, at apex of upper mandible, the latter colour. Legs, toes, and webs connecting toes intermediate between gall-stone and ochre-yellow; claws light brownish red.

FORM, &c.—Body rather robust; head large, compressed and subcrested; wings pointed and when folded reach nearly to the point of the tail, first and second quill feathers equal and longest, third rather shorter, and the fourth

RHYNCHASPIS CAPENSIS.

not quite so long as the third, the tertiary quill feathers about the same length as the fifth primary quill feather. Tail rather rigid and slightly rounded, the feathers generally pointed. Bill rather long, narrow, and at base of considerable depth, flat anteriorly, and broadest towards tip; nail at apex of upper mandible well developed; nostrils oval and rather large, ciliated processes on inner side of edges of upper mandible strongly developed. Legs and toes short and rather slender; the *tarsi* latterly and behind covered with small reticulated scales, anteriorly towards base of middle toe with rudimentary plates. Toes covered with oblique transverse plates; the web reaches to the base of the claws, and on the inner side of the outer and inner toes, and on each side of the middle toe, is covered with several rows of small scales; claws short, slightly curved, and rather blunt.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	1	6
the tip of the tail	21	0	of the outer toe	1	7½
of the bill to the angle of the			of the middle toe	1	8
mouth	2	8	of the inner toe	1	3
of the wings when folded ...	10	6	of the hinder toe	0	5½
of the tail.....	4	0			

Young.—The light colours of the head, neck and body are more rusty than those of the adult, and the brown lighter and with less lustre. The shoulder coverts are pale brownish red glossed with greyish blue, the secondary quill coverts only narrowly tipped with white; the outer vanes of the secondary quill feathers only slightly glossed with shining blackish green, and hence no distinct wing speculum exists. Base and portion of bill towards apex umber-brown, centre light reddish brown, sides oil-green, finely powdered with umber-brown.

This duck occurs abundantly in the marshes and on the small lakes which exist in the Cape district, but more sparingly in the interior, excepting in the neighbourhood of the towns of Worcester and Uitenhage.



CAPRIMULGUS NATALENSIS Male
(Aves. Plate. 99)

CAPRIMULGUS NATALENSIS.—SMITH.

AVES.—PLATE XCIX. (MALE.)

C. rufo-albo, subflavo, nigro-brunneoque variegatus; plumis scapularibus maculis oblongis nigro-brunneis signatis; gutture antice macula alba subtriangulare instructa; remigibus quatuor externis brunneo-rubris, singulo, maculâ albâ instructâ; caudâ nigro-brunneo-fasciatâ.

LONGITUDO e rostri apice ad basin caudæ 4 unc. 9 lin.; caudæ 4 unc. 6 lin.

COLOUR.—The feathers of the upper surface of the head and of the posterior part of the neck liver-brown, broadly margined and tipped with reddish orange; eyelids mottled light reddish orange, white, and liver-brown; the two first in small blotches, the latter in narrow transverse lines. Ear coverts and feathers immediately posterior to them liver-brown, crossed with some fine narrow lines of reddish orange; the feathers of the anterior part of the throat pale reddish orange, narrowly barred transversely with liver-brown; those at and behind the angle of the mouth, as also those on the centre of the throat, white. Between the white marks, and on the throat in front of the breast, the feathers are liver-brown, barred, and tipped with reddish orange. Interscapulars umber-brown, finely mottled at their edges with light reddish orange; back and upper tail coverts umber-brown, barred and tipped with reddish orange. Scapulars with a number of strongly marked and well-defined oblong liver-brown spots, each more or less distinctly edged with white or light buff-orange. These spots are arranged in somewhat longitudinal rows, one about the middle of each feather, and, from their so strongly contrasting with the other colours, constitute a ready and available character. The other portions of the scapularies light buff-orange, closely barred transversely with delicate liver-brown lines. Lesser wing coverts umber-brown, mottled with reddish white spots and reddish orange lines. Quill coverts umber-brown, incompletely barred with reddish orange. Primary quill feathers brownish red. The four outermost of each wing with a large white blotch on the inner vane, about midway between the quill and tip of the feather; the corresponding parts of the outer vane of the third and fourth

CAPRIMULGUS NATALENSIS.

also white; the rest of the quill feathers barred deep reddish orange and brownish red. Tail feathers liver-brown, and variegated with a number of incomplete light bars, formed by a congeries of short waved buff-orange lines extending along the feathers; the last half of the two outermost tail feathers, and the basal portion of the outer vane of the outermost one, white. Breast dark reddish brown, the feathers towards their points blotched with white or sienna-yellow. Belly, flanks, and vent buff-orange; the former barred transversely with brownish red. Legs and toes yellowish brown, with a fleshy tint. Eyes deep umber-brown.

FORM, &C.—Bill, anterior to frontal feathers, triangular, towards the point narrow, compressed, and much curved, towards the base strongly depressed. Gape very large, the angle of the mouth below the hinder angle of the eye. Wings moderately long, slightly rounded, and when folded reach to within about an inch of the tip of the tail; the second and third quill feathers equal and longest, the fourth slightly shorter, and the first a little shorter than the fourth; the tertiary quill feathers in length about equal to the sixth primary quill feather. Tail slightly rounded. Tarsi moderately robust, and anteriorly, towards upper extremity, covered with feathers; elsewhere scutellated. The middle toe is considerably longer and stronger than the lateral ones, to each of which it is connected, as far as the first joint, by a membranous web; claw long, slightly curved, and strongly pectinated, the other claws short, strongly curved, and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus	0	8
point of the tail	9	3	of the outer toe	0	5½
of the bill to the angle of the			of the middle toe.....	0	9
mouth	1	2	of the inner toe	0	6
of the wings when folded ...	6	3	hinder toe	0	2½
of the tail.....	4	6			

Female.—Colours the same as those of the *male*, only neither so deep nor so bright.

The two specimens of this species which I possess—all I have yet seen—were killed in the vicinity of Port Natal, and were, at the time they were shot, actively employed in catching insects in the dusk of the evening, close to a Kaffer kraal, and in the same locality in which they had been watched for several evenings before.



CHERAMUS, FIG. 1. A. 1866

CAPRIMULGUS RUFIGENA.—SMITH.

AVES.—PLATE C. (MALE.)

C. superne pallide purpureo-griseus, lineis undatis gracilioribus, nigro-brunneis variegatis; tectricibus alarum minoribus nigro-brunneis, late rufo-albo-marginatis; gutture, duobus maculis albis instructo; genis et torque cervicale rubro-auranteis, nigro brunneoque-variegatis. Remigibus quatuor externis, brunneo-rubris, fascia alba transversa instructis; rectricibus duabus intermediis griseis, anguste nigro-brunneo-fasciatis et inter fascias, lineis nigro brunneis longitudinalibus maculatis.

LONGITUDO e rostri apice ad basin caudæ 4 unc. 4 lin; caudæ 5 unc.

COLOUR, &c.—The upper surface of the head, the back of the neck, the interscapulars, the back, the upper tail coverts, and the scapular feathers pearl-grey, faintly variegated with very slender transverse or oblique lines, and strongly with broad longitudinal streaks, all of a liver-brown colour. The streaks are most numerous along the mesial line of the head, on the back of the neck, and the scapulars, and several of those on the latter are internally margined with buff-orange, which offers a marked contrast to the elsewhere dark hue of those feathers. The lesser wing coverts umber-brown, finely freckled with reddish white, and irregularly but conspicuously tipped with buff-orange. The four outermost primary quill feathers brownish red; the first and second, with a broad white bar across the inner, vane a little nearer to the point than to the base of the feather, the third and fourth with the same kind of bar extending across both vanes. The rest of the primaries, the secondaries, and all the tertiaries, except the three innermost, brownish red, more or less completely barred with rusty reddish orange; the three tertiaries liver-brown, in the course of the shafts, and towards the edges pearl-grey, freckled with liver-brown. Tail feathers, with the exception of the two middle ones, dark umber-brown, irregularly crossed with more or less complete narrow bars composed of small reddish white spots, and the two outermost feathers of each side broadly tipped with white; the two middle tail feathers pearl-grey, with narrow angular umber-brown bars, and the intervals between them, which are wide, are variegated with longitudinal or waved, narrow, umber-brown

CAPRIMULGUS RUFIGENA.

lines. The lateral and the posterior parts of the neck, in front of interscapulars with a rusty buff-orange collar blotched with umber-brown, and on each side of the throat, immediately below the angle of the mouth, is a large white spot, the one separated from the other by the intervention of a few feathers spotted buff and umber-brown. Eyes dark brown. Tarsi and toes intermediate between buff-orange and yellowish brown ; claws brownish red.

FORM, &c.—Bill subtriangular, and the culmen throughout its whole length distinctly defined, and considerably curved towards the point ; upper mandible, immediately before frontal feathers, with a thin sprinkling of short rigid bristles. Wings of moderate length, slightly rounded, and when folded reach within an inch of the tip of the tail ; the second and third quill feathers equal and longest, the first slightly shorter, and the fourth a little shorter than the first. Tail slightly rounded. Tarsi and toes rather slender, the upper half of the former, anteriorly, covered with short feathers, the other parts with small plates ; claw of middle toe with six, seven, or eight teeth.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	10
the tip of the tail.....	9	4	of the outer toe	0	3
of the bill to the angle of the			of the middle toe	0	7½
mouth	1	1½	of the inner toe	0	3¼
of the wings when folded.....	6	2	of the hinder toe	0	2
of the tail.....	5	0			

Female.—Colours not known.

During my residence in South Africa, I procured six male birds of this species, but not one female. It is chiefly found in the eastern districts of the colony, and, in common with the other Cape species, seeks its food generally in the dusk of the evening, and during the early part of the night. Districts abounding in brushwood seem to constitute the favourite haunts of the African Goat-suckers ; and where high roads pass through a country so provided, they are most frequently found on or near them, either skimming along them or across them. During the day they remain perched on the lower branches of brushwood in retired positions, and if by accident they be disturbed, they never fly further than the first copse which proves suitable as a place of concealment.



CAPRIMULGUS LUNIFRONS

PLATE 10

CAPRIMULGUS LENTIGINOSUS.—SMITH.

AVES.—PLATE CI. (FEMALE.)

C. superne nigro-brunneus, lineis maculisque lactifloribus variegatis; torque cervicale coloris ejusdem; remigibus primariis internis, secundariisque rubro-auranteo-fasciatis; gutture inter mandibulæ extremitates posteriores maculâ alba instructo; pectore fusco, maculis lactifloribus variegato; abdomine pallide rubro-auranteo, brunneoque transverse tæniolato.

LONGITUDO e rostri apice ad basin caudæ 5 unc. 2 lin.; caudæ 5 unc. 4 lin.

COLOUR.—The ground colour of the upper parts of the head, neck, and body liver-brown, freely speckled with small spots, waved lines, and irregular blotches of pale buff-orange. The latter most numerous on the shoulders and neck anterior to the interscapulars, where they form a sort of demi-collar; the variegations are most profuse on the neck, shoulders, and scapulars. On the throat, between the hinder extremities of the lower jaw, a large white blotch; the other parts of the neck, anteriorly, liver-brown, narrowly barred with buff-orange. Breast dull liver-brown, freckled, and blotched with buff-orange; belly and vent pale reddish orange, the former scantily banded transversely with umber-brown. Under tail coverts barred with umber-brown. Primary and secondary quill feathers brownish red, the four outermost of the former with a white spot on inner vane rather nearer to the tip than quill; towards the point these quill feathers are irregularly banded or variegated with pale buff-orange lines, and the inner primaries and the secondaries are on the outer vanes deeply barred with a tint intermediate between tile-red and buff-orange; tertiary quill feathers brownish red, profusely variegated with oblique lines of buff-orange. Tail feathers umber-brown, barred irregularly with pale buff-orange, and the four or six middle feathers between these bars are profusely variegated with narrow, oblique, pale buff orange lines. Eyes dark brown. Tarsi and toes light brownish red; claws reddish brown.

CAPRIMULGUS LENTIGINOSUS.

FORM, &c.—Bill triangular, immediately anterior to frontal feathers much depressed and the upper mandible is rather wider than the lower, and toward s its point slightly curved. Wings long, slightly rounded, and when folded reach to within an inch of the tip of the tail, the second and third quill feathers nearly if not of equal length, and longest, the first about half an inch shorter, and about equal to the fourth; the secondary and tertiary quill feathers very short, scarcely reaching to the base of the tail. Tail long and slightly rounded. Tarsi and toes moderately strong, the former posteriorly and anteriorly towards toes scutellated, towards hinder extremity feathered. Claw of middle toe long, slightly curved, and strongly pectinated; claws of other toes short, pointed, and strongly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsi	0	10½
the tip of the tail....	10	6	of the outer toe	0	4½
of the bill to the angle of the			of the middle toe.....	0	9
mouth	1	4	of the inner toe	0	4
of wings when folded	7	6	of the hinder toe	0	2
of the tail.....	5	4			

Male.—Colours not known.

The two individuals I possess were procured in Great Namaqualand; the one, when it was shot, was seated upon a high road, and the other was skimming around a pool of stagnant water, and occasionally darting from its general course as if to capture insects. Many other individuals, probably of the same species, were observed in the same country; but as they all kept so extremely close to the edge of the brushwood, and never appeared till the dusk was about giving place to darkness, two specimens only were obtained.



THE BIRD OF THE FUTURE
A. B. 1888

CAPRIMULGUS EUROPÆUS.—Auct.

AVES.—PLATE CII. (FEMALE.)

C. pallide griseus, lineis, nigro-brunneis, transversis, longitudinalibusque instructus; tectricibus alarum minoribus maculis subalbis notatis lineam obliquam formantibus; remigibus brunneo-rubris, aurantio-rubro-fasciatis; gutture, antice, fasciâ transversa albâ, instructâ; abdomine subrufo lineis brunneis transversis variegato.

LONGITUDO e rostri apice ad basin caudæ 5 unc. 9 lin.; caudæ 5 unc.

COLOUR.—The ground colour of the upper surface of the head, the hinder surface of the neck, the interscapulars, the back, the tail coverts and the scapulary feathers pearl-grey, variegated with longitudinal stripes, and fine, transverse, waved lines of liver-brown, the stripes along the centre of the head broadest and almost contiguous. The scapulars adjoining the wings are marked with several, short, broad, oblique liver-brown bars and narrow cream-yellow lines, and the inner ones with broad longitudinal liver-brown stripes. Ear coverts, feathers immediately behind them and those below the lower eyelid, reddish-orange, freely freckled with liver-brown, and below the last-mentioned feathers there is a distinct white stripe, which commences at the angle of the mouth and terminates on the side of the neck; below this stripe the feathers are rusty-white, closely barred with narrow liver-brown lines; throat superiorly crossed by a broad white band, many of the feathers barred with umber-brown; behind this band the front and sides of the neck are rusty white, barred with liver-brown; lesser wing coverts umber-brown, those nearest the bend of the wing finely barred with reddish orange, those towards the quill feathers variegated with reddish orange and cream-yellow spots, in addition to the transverse bars. The cream-yellow spots are so arranged as to form a sort of oblique spotted band across the wing. Primary and secondary quill coverts umber-brown, narrowly barred and tipped with cream-yellow; primary quill feathers brownish red, barred with light reddish orange, the bars more or less speckled with umber-brown stripes or spots; secondary and tertiary quill feathers umber-brown, the outer vanes freely

CAPRIMULGUS EUROPÆUS.

variegated with spots or waved lines of a cream-yellow colour, the inner vanes with moderately regular bars. Tail feathers buff-orange, narrowly barred with umber-brown, the convexity of the bars towards the base of the tail. Besides the bars, the light spaces between them are profusely sprinkled with umber-brown spots and waved lines. Breast finely barred white and liver-brown. Belly and flanks rusty white, the flanks darkest, and both are marked with transverse liver-brown bars, not so closely set, however, as those of the breast; feathers of tarsi cream-yellow. Eyes dark brown.

FORM, &c.—Bill subtriangular, towards frontal feathers depressed, towards tip compressed, narrow, and slightly curved. Wings long, pointed, and when folded reach nearly to the tip of the tail; the second quill feather the longest, the first a little shorter, and the third rather shorter than the first, the fourth about an inch shorter than the third. Tail even, or very slightly rounded. Legs short, the upper and anterior portion of tarsus covered with feathers, elsewhere it is scutellated. The outer and inner toes connected to the middle one by membrane as far as the first joint; claw of middle toe slightly curved and strongly pectinated; the claws of the other toes short, much curved, and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus	0	9
point of the tail	10	9	of the outer toe	0	4
of the bill to the angle of the			of the middle toe....	0	7½
mouth	1	0	of the inner toe	0	4
of the wings when folded ...	7	7	hinder toe	0	2¼
of the tail	5	0			

Male.—Colours not known.

All the individuals of this species which I procured in South Africa were females, and most of them were killed near Cape Town, or in the Cape District. It is certainly of the same species as the Nightjar which periodically visits Europe. Many of the Cape Colonists maintain that the various species of "*Naght uil*" (night owl), as the birds of this genus are called by the Dutch, remain the entire year in the colony; others affirm that they proceed to the northward on the approach of winter, and do not return till the following summer. With those who believe they are permanent residents I am disposed to agree, as I have more than once seen individuals in the middle of the winter. They all appear, each in its favourite locality, about dusk, and between that time and daylight next morning are generally to be seen actively engaged in capturing their food.



PLOCEUS MARIQUENSIS.
Aves—Plate 103.

PLOCEUS MARIQUENSIS.—SMITH.

AVES.—PLATE CIII.

P. capite, cervice, dorso, pectore, ventre uropygioque flavis; interscapulis subbrunneis flavo-viridi-marginatis; remigibus brunneo-rubris flavo-marginatis; rostro pedibusque pallide flavo-brunneis carneo-tinctis.

LONGITUDO e rostri apice ad basin caudæ 3 unc. 7 lin.; caudæ 2 unc. 4 lin.

COLOUR.—The upper and lateral parts of the head, and the back and sides of the neck, gamboge-yellow, faintly tinted with green and variegated with umber-brown streaks—each feather having one of these in the course of the shaft. Interscapulars umber-brown, broadly edged and tipped with a yellow of the same character as that of the head. Back, rump, and upper tail coverts yellow like the head, the latter verging to lemon-yellow. The lesser wing coverts brownish red, edged with lemon-yellow; the primary and secondary quill coverts, and the primary and secondary quill feathers, brownish red, the two first edged and tipped with yellowish white, the other two margined externally with lemon-yellow. Breast, belly, and vent intermediate between gamboge and lemon-yellow. Tail feathers broccoli-brown, washed with lemon-yellow, and edged with the latter colour. The upper mandible intermediate between hyacinth-red and yellowish brown; the lower intermediate between wood-brown and flesh-red; the toes and claws intermediate between yellowish brown and flesh-red.

In young birds the yellow, where it exists, is less deep, and on them it appears only very sparingly on the interscapulars and under parts of the body.

FORM, &c.—Figure rather slender. Head small; bill rather strong, particularly at the base, conical, and pointed, the culmen enters slightly between the feathers of the forehead; nostrils small, triangular, and placed near to the base of bill, immediately on the side of culmen. Wings short, rounded, and when folded reach to about the commencement of the second third of the

PLOCEUS MARIQUENSIS.

tail ; the first quill feather rudimentary, the third, fourth, and fifth equal and longest, the second and sixth equal and rather shorter. Tail slightly rounded. Tarsi and toes moderately robust, the former scutellated anteriorly, entire posteriorly. Claws very much curved and pointed, the hinder toe and claw strongest.

DIMENSIONS OF MALE.

Inches. Lines.		Inches. Lines.	
Length from point of bill to base of		Length of tarsus	0 10
tail.....	3 7	outer toe	0 4½
of bill to angle of mouth ...	0 7½	middle toe	0 6½
of wings when folded.....	3 1	inner toe	0 4½
of tail.....	2 4	hinder toe	0 4

This species, like most of the others of the group, is gregarious, and inhabits the banks of rivers to the northward of Kurrichaine, especially those near to the tropic of Capricorn.



PELECANITTA ERYTHORHYNCHA

Aves Plate 104 (Male)

PÆCILONITTA ERYTHRORHYNCHA.—EYTON.

AVES.—PLATE CIV. (MALE.)

P. superne brunnea pennarum marginibus subalbidis, subtus rufo-alba lunulis brunneis notatis; genis juguloque abidis; remigium secundarium dimidio ultimo, tectricibusque remigium secundarium rufo-flavis, fasciâ transversa in medio ænea, nigro-marginata; rostro auranteo-brunneo coccineo-marginato.

LONGITUDO e rostri apice ad basin caudæ 11 unc. 6 lin.; caudæ 3 unc.

ANAS ERYTHRORHYNCHA, *Gmel. Syst.*, i. 517.

PÆCILONITTA ERYTHRORHYNCHA, *Eyton*, Monograph on the Anatidæ, p. 115.

COLOUR.—The top and the sides of the head superiorly umber-brown, all the feathers faintly edged with wood-brown; nape and back of neck pale broccoli-brown; sides of neck and throat light yellowish brown, freckled with numerous small umber-brown spots, those of the throat the darkest; the sides of the head below the eye and the upper portion of the throat yellowish white. Interscapulars, scapulars, back, rump, and upper tail coverts umber-brown glossed with green, the feathers edged with white or light reddish orange. Lesser wing coverts and secondary quill coverts intermediate between olive- and umber- brown, the latter feathers broadly tipped with a colour intermediate between aurora-red and buff-orange. The primary quill coverts, the primary quill feathers, and the base and the principal part of the inner vane of each secondary quill feather brownish red; the middle portion of the outer vane of the secondary quill feather crossed by two narrow dark bars, the basal one shining duck-green, the other velvet-black; the apical half of the outer vane and a little of the inner towards the point of the feather the same colour as the tips of the secondary wing coverts. Breast and under parts rusty white, each feather with two or more narrow transverse arched bars of a brown colour, one of which generally towards the point of each feather is exposed, so that the parts specified are variegated by a number of lunate marks. The middle of the bill is orange-coloured brown, the sides and

PÆCILONITTA ERYTHORHYNCHA.

tip carmine red, the latter tinted with crimson red. Legs, toes, and webs intermediate between pale blackish purple and brownish red. Eyes deep chestnut-brown.

FORM, &c.—Body rather slender. Head large, deep, compressed, and arched superiorly; the forehead considerably inclined to the perpendicular; the neck long and superiorly very slender. Wings long, pointed, and when folded reach nearly to the tip of the tail; the second quill feather rather the longest, the first and third equal and rather shorter, the fourth not quite half an inch shorter than the third, and the fifth about half an inch shorter than the fourth; the longest of the tertiary feathers equal in length to the second primary quill feather. Tail feathers of equal or nearly equal length, and all the feathers pointed and slightly rigid. Bill narrow, rather wider towards the tip than at the base, and considerably depressed, except close to the forehead, and superiorly slightly convex. Nostrils situated near to the base, on each side of the narrow bifurcate elevation of the culmen. Tarsi rather long and moderately strong; anteriorly coated with a vertical row of small plates, laterally and posteriorly with small and irregular-shaped scales. Toes moderately long, the webs reaching to the claws; the anterior edge of the inner one straight and oblique, that of the outer lunate. Claws short, slender, and slightly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to the			Length of the tarsus	1	6
base of the tail	11	6	of the outer toe	1	6
of the bill to the angle of the			of the middle toe.....	1	7
mouth	2	1	of the inner toe	1	2
of the tail.....	3	0	of the hinder toe.....	0	4½
of the wings when folded ...	8	4½			

Female.—Colours not known.

Specimens of this duck are occasionally observed in the interior of the Cape Colony, but owing to their being so very shy and inhabiting districts but little frequented, only few comparatively are procured. The slightest noise in the neighbourhood of pools of stagnant water, to which they generally resort, excites their suspicion, and the instant they have reason to believe that danger threatens them they leave their feeding place, and seek security in some retired spot far from the source of their fears.

Save that the wings of this duck are longer in comparison than those of *Querquedula*, and that the culmen close to the front is rather differently formed, I see no grounds for considering it as of a different groupe to the genus just mentioned.



ORZOTOMIA TOTTIHOPEI

NEW ZEALAND
MARCH 1890

QUERQUEDULA HOTTENTOTA.—SMITH.

AVES.—PLATE CV.

Q. brunnea, genis guttereque summo rufo-albis; alarum speculo æneo postice atro-marginato; remigibus secundariis albo-terminatis; rostro nigro-veride purpureo-marginato.

LONGITUDO e rostri apice ad basin caudæ 10 unc.; caudæ 2 unc. 10 lin.

COLOUR.—The top and sides of the head superiorly rich umber-brown, the feathers edged narrowly with yellowish brown; the sides of the head, upper portion of the throat, and a longitudinal stripe extending from the eye towards the nape light buff-orange; the back and sides of the neck towards the head finely mottled greyish white and umber-brown. Lower portion of neck, breast, and under parts intermediate between tile-red and yellowish brown, each of the feathers of the neck and breast with one distinct, short, umber-brown bar or spot near its tip; each of those of the belly with several narrower and more lengthened bars; flanks without variegations. Inter-scapulars and scapulars deep umber-brown, the former edged with a colour like that which prevails on the under parts of the body, the latter with a pale buff-orange stripe in the course of the shaft. Back liver-brown, the feathers faintly tipped with white; upper tail coverts pale yellowish brown, crossed with numerous narrow umber-brown bars; tail feathers dull rusty brown, edged narrowly with wood-brown. Lesser wing coverts, primary and secondary quill coverts, and the outer vanes of the primary quill feathers liver-brown with a green gloss; the inner vanes of the primary and secondary quill feathers brownish red. The basal two-thirds of the outer vanes of the secondary quill feathers a shining duck-green, their points white, and the two colours separated from each other by a transverse bar of velvet black. The tertiary quill feathers a deep shining blackish green. The upper mandible blackish green along the middle, dull plum-purple on the sides and tip. Legs, toes, and webs livid bluish green; claws a pale horn colour. Eyes dark brown.

QUERQUEDULA HOTTENTOTA.

FORM, &c.—Figure slender. Head moderately large, deep, strongly arched above, and considerably compressed; neck rather short and slender. Wings short, slightly rounded, and when folded reach only to the base of the tail; the first, second, and third feathers longest and almost equal, the fourth rather shorter, and the fifth rather shorter than the fourth. Tail rather long, all the feathers pointed. Tarsi short and laterally compressed; anteriorly with a vertical row of small plates, laterally and behind coated with small irregular-shaped scales. Bill narrow and throughout nearly of equal width, high at base from the projection of the culmen, depressed anteriorly and slightly convex. Toes rather long and slender, the webs reaching to the claws; claws slightly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to the			Length of the tarsus	1	0
base of the tail	10	11	of the outer toe	1	4½
of the bill to the angle of the			of the middle toe....	1	5
mouth	1	6	of the inner toe	0	10½
of the tail	2	10	of the hinder toe	0	2½
of the wings when folded ...	5	8			

Female.—The colours generally are lighter and less clear than those of the male; the most striking difference, however, is the absence of a defined brilliant speculum to the wings, the portion of the feathers in the female being only slightly green.

The only specimens of this species (two in number) which I have seen, were shot on a large lake about one hundred miles to the north-west of Cape Town. It is a shy bird, and readily takes to flight; but it never, so far as I observed, proceeded to any great distance.

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IN THE YEARS 1834, 1835, AND 1836;

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TOGETHER WITH

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MDCCCXLIV.



FALCO SEMITORQUATUS

Avis - Platel .

Le Faucon Semitorquatus

FALCO SEMITORQUATUS.—SMITH.

AVES.—PLATE I. (MALE.)

F. parte superiori capitis, dorso, humerisque cineraceis; capitis lateribus, fasciâ cervicali, tectricibus superioribus caudæ, partibusque inferioribus albis; remigibus rectricibusque brunneo-nigris maculis albis in seriebus transversis variegatis; rostro ad basin, cerâ, pedibusque flavis; rostri apice, unguibusque nigris; oculis flavis.

LONGITUDO 7 unc.

FALCO SEMITORQUATUS, Rep. of Exped. page 44. June 1836.

COLOUR.—The upper part of the head, the back, the secondary quill coverts and a few of the innermost tertiary quill feathers cinereous or ashy blue; the sides of the head a broad transverse band on the back of the neck, the upper tail coverts, and all the under parts pure white. Primary quill coverts, quill feathers and tail dull brown or brownish black, freely variegated with white spots. On the quill feathers, the spots on the outer vanes consist of somewhat circular or semicircular blotches, on the inner vanes of more or less lengthened transverse bars, the latter more numerous than the former, which are generally four on each web, except in the case of the first primary, which is often spotless. On the tail the forms of the white spots are somewhat similar to what they are upon the wing feathers, and the number upon each vane is generally equal, commonly five, so that when the feathers are spread, it appears crossed by that number of interrupted white bars; both the quill and tail feathers tipped with white. Cere, basal half of bill, legs and toes yellow, distal half of bill livid blue, with the extreme tip nearly black; claws black; eyes yellow.

FORM, &c.—Bill rather compressed, and the point of the upper mandible much hooked. Tarsi and toes moderately strong for the size of the bird, the former covered in front by entire or divided plates, behind and on the sides by scales. Claws much curved; wings when closed reach nearly over the first two-

FALCO SEMITORQUATUS.

thirds of the tail ; second quill feather longest ; first and third nearly equal, and rather shorter than the second ; the extremity of the tail slightly rounded.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus	1	1
end of the tail....	7	0	Length of middle toe.....	0	9
of the bill from the angle of the			Length of hinder toe.....	0	4½
mouth	0	9			
of the wings when folded	4	3			
of the tail.....	3	0			

In the *female*, the scapulars and the back are deep chesnut brown ; in other respects the colours are similar to those of the male. In point of size there is a little difference, the female being nearly eight inches and a half in length.

Only three specimens of this elegant little Falcon were procured by the expedition party, and those nearly in the same spot, among some large mimosa trees a little to the eastward of Old Latakoo. None of them were ever observed soaring like other falcons, and the few individuals that were seen were either perched upon the lowermost branches of the trees, or in the act of flying from one tree to another. Considering that this bird was never afterwards procured or even seen more to the eastward, it is probable that the proper habitat of the species will be found in the opposite direction, which I am the more inclined to believe, as one of our party declared he had seen it upon the borders of the Kalahari desert during an excursion we made to the westward of New Latakoo. In the stomachs of two were found the remains of small birds, and in the third, portions of a lizard, and different parts of coleopterous insects.

If we are to admit Le Faucon à calotte noir of Levaillant, Ois. d'Afrique, pl. 29, (*Falco tibialis*, Daud.) to be a native of South Africa, we have now eight species of true Falcons inhabiting that part of the globe ; viz.

<i>Falco rupicolus</i> , Daud.	<i>Falco tibialis</i> , Daud.
rupicoloides, Smith.	Chicquera, Le Valliant.
biarmicus, Temm.	Subbuteo, Lin.
peregrinus, Lin.	semitorquatus, Smith.

The four species in the first column occur in almost every district of the country which has yet been explored ; the fifth species, if it has a place in South Africa, must be very confined in its range, as I have never either met it myself, nor seen it in collections made by others. The sixth species was for the first time discovered during the movements of the expedition between the principal branches of the Orange river, and it was not until that discovery I could persuade myself that Levaillant had correctly ranked it as an African bird. The seventh is rarely procured, and I have never seen specimens at any great distance from Cape Town. The eighth probably never reaches the latitude of the colony.



C. ERHIS CONCOLOR

1877

CHIZÆRHIS CONCOLOR.—SMITH.

AVES.—PLATE II. (MALE.)

C. cinereo-griseus brunneo-tinctus; humeris scapularibusque cupreo-viridi umbratis; remigibus viridi-brunneis; caudâ viridi-griseâ; rostro pedibusque nigris; capite cristato, cristæ plumis decompositis e fronte porrectis.

LONGITUDO 20 unc.

COLIPHIMUS CONCOLOR, Rep. of Exped. page 54, June 1836.

COLOUR.—Dull ashy, or smoke-grey, tinted with brown; the scapulars and shoulders variegated by greenish shades, exhibiting a metallic lustre. Bastard wings, primary quill coverts, and quill feathers, greenish brown; the green most distinct upon the inner vanes; the outer vanes of secondary quill feathers greenish grey, the inner deep green, with a metallic gloss. Tail above glossy greenish grey, except towards the extremity, where it is deep greenish brown, beneath greenish brown with a brassy tint. Bill and claws black; tarsi and toes livid brown. Eyes dark brown.

FORM, &c.—Bill compressed, higher than broad at the base, and its height nearly equal to its length; culmen slightly rounded and arched from the base; the tip of the upper mandible pointed and somewhat hooked, with a slight emargination immediately behind it; commissure slightly sinuated; nostrils small, pierced in the bill, close to the culmen and a little in front of the feathers of the forehead, with a distinct narrow groove extending from each, obliquely downwards and forwards towards the commissure. Wings, when folded, reach over the first third of the tail; fourth and fifth quill feathers longest, and slightly exceeding the third and sixth; the second considerably shorter than the third, and the first not half the length of the fourth. Tarsi and toes moderately robust, the former covered in front by transverse plates, behind and on the sides by minute granular scales. Claws moderately curved. Head surmounted by a long crest, which extends obliquely upwards and

CHIZÆRHIS CONCOLOR.

backwards from the forehead, and is formed of the elongated feathers of that part with their vanes much decomposed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus	1	9
extremity of the tail.....	20	3	of the middle toe	1	3
of the bill	0	11	of the hinder toe	0	3½
of the wings when folded.....	8	6			
of the tail	10	0			

The female scarcely differs either in colour or size from the male.

It was upon reaching 25° 24' south latitude, a point where the rivers began to flow to the eastward, and the country to acquire a partial clothing of dwarf trees and brushwood, that this species was first discovered. As soon as it was observed, the Hottentots declared it to be a *muiss vogel*, or *Colius*, Lin., and they persisted ever afterwards in regarding it as such, which was not surprising, since it evinces considerable similarity to birds of that genus, not only in its carriage when perched, but also in its mode of flight and in various other points which will be noticed more at length hereafter. Its favourite resort seemed to be the immediate banks of rivers, and it was seen either perched upon the highest branches of the trees which occurred in these situations, or flitting to and fro among them in search of the fruits, which constitute its principal food. It is a bird of short flight, and when disturbed and driven from any particular haunt, it seldom passes the nearest tree without alighting, unless it may think itself not sufficiently removed from the source of danger. When flying, it sometimes flaps its wings with considerable quickness and vigour, but more generally it soars along with them completely extended, and even scarcely moves them until it has actually perched. When at rest, and without any suspicion of danger, it has a clumsy dull appearance, with its head sunk to its shoulders, and at such times utters occasionally a harsh cry resembling "*mea*." When excited, however, by the appearance of an object of suspicion, or its attention is arrested by any unusual noise, it exhibits a very opposite and elegant appearance: its crest, which in a state of rest is generally recumbent, then becomes erected, while its head, if not its whole body, is moved in various directions, as if endeavouring to discover the cause of its alarm; and at such times its cries are harsher and more frequent. The individuals first discovered were extremely shy and watchful, but as we advanced in the country, where specimens were more abundant, less caution was observed, and there were days when we might have shot at least forty or fifty individuals had it been desirable. Besides the remains of fruits, the wings and other parts of grylli were found in the stomachs of several which were examined.

When first I became acquainted with this bird I was inclined to consider it as forming a type for a new genus, which I proposed to call *Coliphimus*. Since my return to Europe, however, I have had opportunities of comparing it with *Chizærhis* of Wagler, and not having found sufficient peculiarities to warrant its being regarded apart from that genus, the name by which it was originally designated is consequently discontinued.



PTEROCLES GUTTURALIS
(Aves Fig. 5)

PTEROCLES GUTTURALIS.—SMITH.

AVES.—PLATE III. (MALE.)

Mas. P. capite, collo, pectoreque pallidè sulphureo-viridibus; scapularibus interscapularibusque griseo rubri-brunneo nigro-brunneoque umbratis; gulâ stramineâ postice fasciâ brunneo-nigrâ marginatâ; alarum tectricibus secundariis subrutilis; abdomine castaneo dio; remigibus fuscis, secundariis versus apicem albo-marginatis.

Fem. capite, cervice, dorso, humeris pectoreque brunneo-nigris, subochreo variegatis; gulâ, gutture, collique lateribus pallidè brunneo-flavis; abdomine nigro badio-fasciato; caudæ tectricibus inferioribus badiis, versus basin nigro-fasciatis.

COLOUR.—The upper surface of the head dull green, faintly freckled with black; the sides of the head and the chin straw yellow; eye-brows yellowish white; space between eye and bill black; the neck, the breast, and a portion of each shoulder, intermediate between oil green and sulphur yellow; the bases of all the feathers pearl-grey; immediately behind the yellow of chin, the throat and sides of the neck are crossed by a deep brownish black crescent. The interscapulars and scapulars clouded with pale reddish brown, pearl-grey, and bluish black, or brownish black, the latter generally prevailing towards the quills. Back and upper tail coverts pearly grey, strongly tinged with brown, and when the feathers are separated, each is found of a yellowish brown tint at the base, and with a strong satin lustre. The secondary wing coverts intermediate between Dutch and reddish orange, with the base, and a considerable portion of the inner vane of each pearly-grey; primary wing coverts, and all the quill feathers, umber-brown; the secondaries narrowly tipped with rusty white; the tail feathers blackish brown, the outer vanes edged with pearl-grey, and all, except the two middle ones, broadly tipped with the same colour as the secondary quill coverts. Belly and under tail coverts, between chesnut and reddish brown. Bill and claws a dark horn-colour; eyes dark brown; toes greenish brown.

FORM, &c.—Typical; wings, when folded, nearly reach the tip of the tail; the first quill feather rather longer than the second; the longest of the tertiaries intermediate between the sixth and seventh quill feathers; tail, wedge-shaped, the two middle feathers rather the longest, and acuminate at their extremities; the outer and inner toes of equal length.

PTEROCLES GUTTURALIS.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of bill to the end			Length of the tarsus	1	1
of the tail	12	6	middle toe	1	0
of the tail	0	10	outer toe	0	9
of the wings when folded	8	9	hinder toe	0	1½
of the tail	4	3			

In the *female*, the top of the head is brownish black, spotted with rusty white; back of the neck, dull cream yellow, freely dashed with brown; the sides of the neck and the throat pale honey yellow; the back, the shoulders, and the breast, brownish black, with large cream-coloured spots; belly, deep black, barred with pale chesnut. Under tail-coverts bright chesnut, towards their bases barred with black. Tail, blackish brown, with partial bars of light cream-yellow, and all except the two middle feathers, tipped with pale reddish orange. Length $11\frac{3}{4}$ inches.

This bird was first discovered in latitude $25^{\circ} 40'$, about eighty miles to the eastward of Latakoo, and it was when we remarked its cry to differ from that uttered by *Pterocles Tachyptes*, Temm. that we were led to a suspicion of its being a distinct species. In common with the other South African species of this genus, it repairs in large flocks at regular and fixed periods, to localities where water exists, and it is at such times that specimens are most readily to be secured. The sportsman, however, to be successful, must be quick in his movements, as they scarcely reach the water before they are again on the wing. Both in approaching to, and receding from such spots, they utter almost incessantly sharp cries, somewhat resembling *twet weet, twet weet*. From observing these birds when in quest of means for quenching their thirst, one would be disposed to consider them gregarious; but such notions are soon suspended when their feeding grounds are discovered. Over the latter they are generally dispersed singly or in pairs, and the occasional congregation only takes place by solitary individuals successively joining others who are on the way from a greater distance. This species seeks the water about ten in the morning and three in the afternoon, and in that respect resembles the *Pterocles Tachyptes*, which inhabits a different part of the country. The *Pterocles Variegatus*, which we shall hereafter figure, prefers to drink during the early part of the morning, and the *Pterocles Bicinctus* again, during the dusk of the evening, and the early part of the night. In such an arrangement we must admit design; as, were all of the various species to experience thirst at or about the same time, both delay and difficulty would be experienced in quenching it, since owing to the general scarcity of water in the districts they inhabit, even as it is at present, hundreds of the same species are often to be seen fringing the brink of a pool for hours together, and occasionally disputing for the first sip. Grass-seeds, ants, and abundance of gravel were found in the stomachs of most of the individuals we secured.



OTIS RUFICRISTA
(Aves — Plate 4)

Engl. Haghe Lith. to the Queen

OTIS RUFICRISTA.—SMITH.

AVES.—PLATE IV. (MALE.)

Mas. O. capite supra cæruleo-griseo; fasciâ suborbitali colloque griseis, pallidè brunneo sparsis; striâ superciliari sordidè albâ, nigro variegatâ usque ad nucham porrectâ; cristâ castaneâ; mento, regione paroticâ, maculâque ante alas albis, illo fasciâ longitudinali nigrâ; dorso isabellino lineis nigris undatis, variegatis; scapularibus, interscapularibus, humerisque præterea maculis lanceolatis nigris notatis flavo-albo marginatis; alarum tectricibus secundariis apicibus albis, tectricibus primariis, remiigibusque nigro-brunneis, albo maculatis; pectore ventreque nigris; oculis rubro-brunneis; pedibus albo-flavis; mandibulâ superiore unguibusque viridi-nigris, mandibulâ inferiore ad basin subflavâ ad apicem livida.

OTIS RUFICRISTA, Rep. of Exped. App. page 56, June 1836.

COLOUR.—The upper surface of the head intermediate between bluish and blackish grey; a stripe below each eye, and the neck pearl-grey, the latter closely freckled with wood-brown, except at the lower part of the throat, where the colour is pure pearl-grey, with a lilac blush; eyebrows rusty white, finely mottled with black, and continued on each side of the head until they unite on the nape, immediately over the crest; the latter pale chesnut, darkest towards the point; ear coverts wood-brown; chin and a blotch on each side of the breast in front of wings white, the former divided along its centre by a narrow black stripe broadest behind. Back, shoulders, scapulars, and tertiary quill feathers, between ochre and cream-yellow; all the feathers finely variegated by numerous waved, somewhat transverse black lines, and all except those of the back marked besides, by lanceolate black stripes edged and tipped with cream-yellow. The secondary wing coverts black towards their quills, white towards their tips; the last colour so disposed as to form an oblique white band along the wing. Primary quill coverts and quill feathers, brownish black with transverse white blotches; tail coverts and tail feathers, white, closely barred by fine black lines, the lateral feathers broadly tipped with pure black, the two middle ones crossed near their extremities by a pure black band, which behind is edged with white, the inner vanes of these two feathers black at the points, the outer vanes black, with transverse white lines. The breast, belly and under tail coverts, black. Upper mandible and claws of a dark horn-colour; the lower mandible greenish yellow towards

OTIS RUFICRISTA.

the base, dark horn coloured towards the point; legs intermediate between pale straw and wine-yellow; eyes reddish brown.

FORM.—Neck long; body slender; nuchal crest about two inches long, depressed and formed of fine silky feathers; wings, when closed, extend over the first half of the tail; the innermost tertiaries longer than the primary quill feathers;—the second, third, and forth primaries nearly of equal length; the first rather shorter. The tail rounded at its extremity; outer and inner toes nearly of equal length.

DIMENSIONS.

	Inches.		Inches.	Lines.
Length from the point of the bill to the		Length of the tarsus	3	9
tip of the tail	22	of the outer toe.....	0	8
of the tail	5 $\frac{1}{2}$	of the middle toe	1	0
of the wings when folded	10 $\frac{3}{4}$	of the inner toe.....	0	6
of the bill	2			

The *female* differs so much from the male, that we shall give a figure and description of her in a future number.

This species was first discovered in the vicinity of Latakoo, where it arrested our attention by the peculiarity of its cry, which was intermediate between the harsh *kir kir kac*, of the *Otis Afra*, Lin. and the croak of the *Otis Vigorsi* Smith. Besides the difference in the tone of its cry, it also uttered its calls less frequently than the former, and, as far as we observed, only while flying; thus in the first peculiarity approaching the latter mentioned species, and in the other differing from both. When disturbed, it flies but a short distance before it alights, and when that has once happened, it is no easy task to start it a second time, owing to its habit of squatting among the grass, and remaining tranquil even when almost touched by the feet of the sportsman. It appeared almost exclusively restricted to grassy plains, and rarely occurred in districts supplied with brushwood, from which circumstance only one or two specimens were observed to the north of 25°. Insects, small lizards, scolopendra, &c, seemed to constitute its favourite food, and besides the remains of these, abundance of small gravel was also found in the stomachs of the individuals we procured, which were but few, owing to the specimens being rare, at least in the directions in which we travelled.



FRIGATEBIRD, *FALCOCO*
L. 18. W. 10. T. 11.

PRIONOPS TALACOMA.—SMITH.

AVES.—PLATE V. (MALE.)

P. capite supra pallidè fusco-griseo, argenteo-griseo umbrato; genis albis posticè fasciâ semilunari nigrâ marginatis; dorso humerisque nigro-viridi-nitescens; alis strigâ longitudinali albâ notatis; remigibus primariis brunneis, primo excepto, pogoniis internis fasciâ albâ variegatis, rectricibus duabus intermediis viridi-nigris; lateralibus versus apicem plus minusve albis; rostro nigro; oculis brunneis; pedibus flavis.

LONGITUDO, 8 unc.

PRIONOPS TALACOMA, Rep. of Exp., page 45, June, 1836.

COLOUR.—The upper part of the head light pearl-grey with a dusky shade; the cheeks white, margined behind by a black crescent; the neck and the under parts pure white; the back and the wings a glossy greenish black; several of the shoulder feathers and secondary quill coverts nearly white, and with the broad white edgings which occur upon the outer vanes of two or three of the innermost secondary quill feathers, they form a continuous white stripe along the wing. All the primary quill feathers, with the exception of the first, have their inner vanes crossed by a broad white bar, that of the innermost being much nearer to the extremity of the feather than the outermost; the secondary quill feathers all broadly tipped with white. The two middle tail feathers greenish black; the two outermost of each side pure white, or with only a slight greenish black spot at their bases. The intermediate feathers greenish black towards quills, white towards tips. Bill black; feet pale yellow; claws livid brown. Eyes dark brown, and surrounded by a narrow membranous ring of a bright yellow colour.

FORM, &c.—Typical. The feathers of the forehead very rigid and wiry, some erect, others directed forwards so as to conceal the nostrils; emargination of bill very slight: wings when folded reach over nearly the first half of the tail; the fourth quill feather the longest, the third and fifth of equal length, and a little shorter than the fourth; the second and eighth nearly equal, and considerably shorter than the third; the first not half the length of the fourth. Tail even or very slightly rounded. Tarsi rather long, covered in front by transverse plates, and behind by a continuous

PRIONOPS TALACOMA.

horny shell; the middle toe rather longer than the outermost, the innermost slightly shorter than the latter, and of the same length as the hindmost; claws pointed and considerably curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the bill to the top of the			Length of tarsus.....	1	1
tail	8	0	of the middle toe	0	6
of the tail	3	9	of the inner toe.....	0	4½
of the wings when folded.....	4	4			

The female, as regards the colour of the plumage and the size, differs little if at all from the male.

The first individuals of this species we obtained were killed in about 25° south latitude, and from that parallel specimens continued to occur as far as we advanced to the northward. They were generally observed among low bushes, in flocks of six or eight individuals, and either actively engaged in traversing those bushes, or in exploring the grounds around them in search of insects. The *termites* appeared to form their favorite food; and rarely was a specimen obtained whose stomach did not contain them in abundance. It is a shy bird, and rather noisy. In flying, sometimes all the individuals of the little flock utter their cries simultaneously, and the same practice they frequently observe while searching for food on the ground, or upon bushes. When the mere inclination of one of the flock induces it to fly, all the rest follow the example, and together, wing their way to another locality. The present, the third species yet discovered of the genus, is readily to be distinguished from the other two, (*Prionops Geoffroyi*, Vieillot; and *Prionops cristatus*, Ruppell), by its having no crest.



CRATEROPUS JARDINI

PLATE 1

CRATEROPUS JARDINII.—SMITH.

AVES.—PLATE VI. (MALE.)

C. olivacco-brunneus guttis subalbidis parè notatus; gutture, pectore, abdomineque summo cinereo-brunneis, albo-maculatis; abdomine infimo, caudæque tectricibus inferioribus flavo-cinereis; rostro nigro-fusco; oculis, tarsisque brunneis.

LONGITUDO, 10 unc.

CRATEROPUS JARDINII, Rep. of Exped. page 45, June 1836.

COLOUR.—Above, olive brown; the central portions of the feathers of the upper surface of the head, blackish brown; the points of these feathers, as well as the points of those of the neck and anterior part of the back, marked each with a dull rusty or greyish white spot. The chin, the throat, the breast, and the anterior portion of the belly, ashy brown, each feather with an oblong or spear-shaped pure white spot at its point; the posterior portion of the belly, the vent and the under tail-coverts yellowish grey; the shaft of each of the feathers towards the point, dull white. Shoulders and quill-feathers, dull brown, the outer vanes of the latter slightly margined with a faint rusty white colour; the inner surface of the shoulders, and the inner margins of the wing feathers, pale fulvous, which colour also prevails upon the sides of the breast covered by the bases of the wings. Tail, dark brown; the two middle feathers towards quills strongly tinged with grey, and as well as the lateral ones are crossed by numerous narrow dark bars, which are only distinctly observed in certain lights.* Bill blackish brown; eyes, legs, and toes, dark brown; claws, light brown.

FORM, &c.—Bill nearly as long as the head, moderately strong, the upper mandible distinctly emarginate near the point; culmen moderately curved and slightly obtuse; nasal fossa oval, the nostrils opening towards its inferior and anterior margin; the upper portion of the fossa is closed by a delicate horny membrane; a few strong black bristles near the angles of the mouth. Tarsi strong, in front coated by broad transverse plates, behind and on the sides by a continuous horny shell; hinder toe the strongest and with the largest claw. Wings short, rounded, and when closed cover the first third of the tail; the

* This character occurs in many other species of the genus.

CRATEROPUS JARDINII.

innermost secondaries but very little shorter than the primaries. The 4th primary quill feather longest, and scarcely exceeding the 5th, 6th, 7th, and 8th, the 3rd shorter than the 8th, and not quite so long as the shortest of the secondaries ; the 1st about half the length of the 4th. Tail broad and rounded at the extremity. The feathers of the head, neck, throat, and breast, rigid : those immediately in front of the eyes wiry and decomposed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus	1	6
extremity of the tail	10	0	of the hinder toe	0	5
of the tail	5	0	of the middle toe	0	8½
of the wings when folded	4	6			
of the bill from the angle of					
the mouth	1	1			

In the female the general colours are less bright, and the white spots are not so pure, particularly those on the throat and breast.

The first specimens of this bird were obtained in latitude 25° 24' S., and, as we have reason to believe, upon the extreme limit of its southern range. Where the species was first discovered, only a very few specimens were observed ; but, by the time we had reached a degree more to the northward, they occurred in great abundance. Spots covered with reeds, such as are seen along the margins of many of the rivers of the country they inhabit, appeared to form their favorite feeding places ; and though, when disturbed, they would leave those for a time, and take up their abode among the brush-wood with which the banks of the streams were more or less covered, they invariably returned to the haunts they had left when the cause which led them to remove had ceased to exist. While lodged among the reeds they were almost incessantly in motion ; and, from their being generally associated in great numbers, the noise occasioned, partly by their flitting from one stem to another or climbing, and partly by the harsh cries they uttered, more especially on the appearance of danger, rendered even a temporary residence in the vicinity of their haunts quite disagreeable. Though they evidently preferred, as resorts, the situations described, yet, where reeds did not occur, they were occasionally found among the brushwood remote from rivers ; and in these positions they also displayed an extremely restless disposition ; scarcely were they observed to enter a bush or thicket before they were seen leaving it from the opposite side, for an adjacent one. Though such was their common practice, there were times when they appeared less disposed to hasty changes, and when they were to be noticed, not simply following a tortuous course, but even ascending and descending among the branches ; nay, even visiting the ground below and around the bushes. As far as we had opportunities of judging, they feed exclusively upon insects ; and those which were killed when among the reeds, seemed to have committed great havoc upon the larvæ of *Gryllidæ*, &c. while those obtained among the brushwood appeared principally to have fed upon coleopterous insects.



EUPLECTES TAHIA. A Male B Female
A. N. S. P. 1916. 7

EUPLECTES TAHA.—SMITH.*

AVES.—PLATE VII.—(MALE.)

Mas in æst. E. niger; capite supernè, dorso, caudæ tectricibus superioribus et inferioribus, fasciâque ante humeros flavis; humeris, remigibus, rectricibusque cinereo-brunneis; oculis brunneis; pedibus flavo-brunneis.

LONGITUDO, 4 unc. 9 lin.

Mas in hyem., et Fem. E. supra pallidè flavo-brunneus, nigro-striatus; subtus cinereo-albus lineis brunneis variegatus; gutture pectoreque ochreo tinctis; strigâ superciliari flavescenti-albâ.

COLOUR.—(*Male, summer plumage.*) The crown of the head, the back, the upper and under tail-coverts, the vent, and a narrow oblique stripe on each side of the breast immediately in front of the shoulders, bright yellow; shoulders, quill feathers, and tail, grey-brown; the shoulder feathers, and the outer vanes of the quill feathers, faintly edged with dirty white; insides of shoulders pale cream-yellow verging on white; thighs pale yellow, freckled with brown. The space in front of the eyes, the sides of the head, a stripe on each side of back adjoining the bases of the wings and all the under parts of the body as far as the vent, deep brownish black. Bill light umber-brown, the lower mandible lightest. Feet and claws yellowish brown; eyes brown.

(*Male, winter plumage.*) Above, pale yellowish brown; the head, neck, and interscapulars, freely dashed with longitudinal brownish black stripes or blotches, and the back and upper tail coverts with faint narrow stripes of the same colour; shoulder feathers blackish brown edged with rusty white; quills and tail grey-brown, the former margined externally with rusty white, the latter margined on both vanes and tip with the same colour. Eyebrows yellowish white; ear coverts pale rusty brown; under parts of body greyish white, the throat and breast tinged with sienna yellow, and these as well as the flanks are variegated by longitudinal brown streaks. Bill, particularly the lower mandible, lighter than in the summer season.

* In bringing this bird under the notice of our readers, I have not adopted the generic term (*Oryx*) introduced by Lesson, (*Traité d'Ornithologie*, tom. i. fol. 437. Paris 1831.) who first established the genus to which it belongs, merely because the same term had previously been selected by Col. H. Smith, (*The Animal Kingdom*, translated by E. Griffith, vol. 5.) to designate one of the forms of the *Antelopidae*.

EUPLECTES TAHA.

FORM, &c.—Typical. Wings, when folded, reach over the first half of the tail; the first, or spurious quill feather, very small, the second but very little shorter than the third, which is the longest; tail even. Tarsi rather slender; outer and inner toes of equal length, and rather longer than the hinder one, the middle toe considerably longest; claws long, slender, and but slightly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus	0	9
point of the tail.....	4	9	the middle toe	0	7
of the tail	1	5	the outer toe.....	0	4½
of the wings when closed.....	2	7	the hinder toe	0	4

The adult female, during the summer and winter exhibits nearly the same coloured plumage as the male in winter.

The present species is more nearly allied to *Euplectes melanogaster*, (*Loxia melanogaster*, Lath.) than to any other species of the genus yet described; it is, however, readily to be distinguished from it, by the under part of the body being black, while in *E. melanogaster*, the middle of the breast and belly only are black, the sides being yellow.

Immediately preceding the breeding season, the birds of this species begin to moult, at which time the new feathers of the males appear with the colours described, and these colours they retain until the approach of autumn, when they gradually lose them, and assume the tints of the females. The species does not appear to extend south of 26°, at least we discovered no individuals prior to reaching that latitude; and the natives more to the southward, appeared unacquainted with the bird. In the districts to the north of 26°, however, it was common, and large flocks were often observed among the trees near to the banks of rivers. Though they were generally among trees at the time we passed through the country, we were informed they leave them on the commencement of the breeding season, for the reeds which here and there skirt the rivers, and from those they suspend their nests. Like *Euplectes oryx*, they prove very destructive to gardens during the summer season, and it requires some of the natives to be constantly on watch to save their crops from being entirely devoured by the one or other of these species.

It may not be out of place to mention that the species of this genus inhabiting Southern Africa are

Euplectes oryx, (*Loxia oryx*, Lin.)

Euplectes Capensis, (*Loxia Capensis*, Lin.)

Euplectes Taha, Smith.



THE LARK OF THE FIELD.
AVES. 1855.

PHILETÆRUS LEPIDUS.—SMITH.

AVES.—PLATE VIII. (MALE.)

P. capite dorsoque pallidè flavo-brunneis; collo supernè, interscapularibusque nigro-brunneis; plumis albo-marginatis; remigibus rectricibusque brunneis, harum apicibus isabellinis, gulâ strigâque ad basin rostri nigris; genis, collo subtus, pectore ventreque pallidè isabellinis, vittâ longitudinali ante femora nigrâ, plumis albo-marginatis; oculis brunneis; rostro pedibusque pallidis.

LONGITUDO, $4\frac{3}{4}$ unc.

LOXIA SOCIA, *Latham*, Pater's Voy. Pl. 19.

PLOCEUS SOCIUS, *Cur.* Reg. Animal. tom. i. p. 384. 1817.

PHILETÆRUS LEPIDUS, *Smith*, Mag. of Nat. History, new series, vol. i. p. 536.

EUPLECTES LEPIDUS, *Suainson*, Lard. Cab. Cyclopædia, vol. Menageries, page 309.

COLOUR.—The top of the head, the nape and the back drab brown; the back and sides of neck, and the interscapulars umber-brown; each feather margined with pale isabella colour; chin, and a stripe at the base of the bill which terminates on a line with the eye, black. The wings and tail light umber-brown; the tertiary quill feathers broadly edged and tipped with isabella colour; the tail feathers also that colour at their extremities. The sides of the head, the under part of the neck, the breast and belly, a pale isabella colour; the flanks pale rusty brown; in front of each thigh a deep black stripe; the feathers margined with yellowish white. Bill and legs a pale horn-colour, the former slightly clouded with brown. Eyes dark brown.

FORM, &c.—Figure rather slender; bill more compressed than in *Euplectes*; culmen slightly arched from the base; commissure sinuated; legs and toes strong; tarsi in front covered by transverse plates, the margins of which are distinctly defined; outer and inner toes nearly of equal length; claws pointed and much curved, the hinder one not so long in proportion as in the typical species of *Euplectes*; wings, when folded, reach to about the middle of the tail. The first or spurious quill feather very short, often scarcely discernible; the second, third, and fourth nearly of equal length, and the longest; the extremity of the tail slightly rounded.

PHILETÆRUS LEPIDUS.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the bill to the point of			Length of the tarsi.....	0	8
the tail	4	9	the outer toe.....	0	3½
of the tail.....	2	0	the middle toe	0	5½
of the wings when folded.....	2	10	the hinder toe	0	3½
of the bill from the gape	0	7			

The female differs from the male in having the feathers of the back and sides of neck and the interscapulars light brown in place of umber-brown.* In young specimens the head is streaked with brown, the patch in front of the thighs consists of perfectly distinct black blotches, and no appearance of black exists either on the chin or at the base of the bill.

The banks of the Orange river appear to constitute the southern limit of this bird's range; but specimens were only obtained in great abundance in the districts around Latakoo, far from water. The most striking peculiarity observed in the species, is the extraordinary manner in which a number of individuals associate, and build their nests under a common roof. When a nestling place has been selected, and the operation of building the nests is to be commenced *ab initio*, the community immediately proceed conjointly to construct the general covering which interests them all; that being accomplished, each pair begins to form their own nest, which, like the roof, they construct of coarse grass: these are placed side by side against the under surface of the general covering, and by the time they are all completed, the lower surface of the mass exhibits an appearance of an even horizontal surface, freely perforated by small circular openings.

They never use the same nests a second time, though they continue for many years attached to the same roof. With the return of the breeding season, fresh nests are formed upon the lower surface of those of the previous year, which then form an addition to the general covering. In this manner they proceed, year after year adding to the mass, till at last the weight often becomes such as to cause the destruction of its support, upon which a new building-place is selected. They appear to prefer constructing these nests upon large and lofty trees, but where such do not occur, they will even condescend to form them upon the leaves of the arborescent aloe (*Aloe arborescens*), as occasionally happens towards the Orange river. The commencement of the roof is firmly interwoven with the branches of the trees to which it is intended to be suspended; and often a great part of a principal branch is actually included within its substance. Each female lays from three to four eggs, which are of a bluish-white colour, and freely mottled towards the large end with small brown dots. When once this species has attained maturity, it never afterwards exhibits any change in respect to colours. The male has no summer tints which he throws aside in winter, as is the case in *Euplectes*. Seeds, and occasionally small insects, constitute the food.

* By a mistake, it was stated in the description of this bird, when it was proposed as a type of a sub-genus, that the female was without the black chin.



FRIGATE, *FREGATA FREGATA*, L.
(Aves—Plate 9.)

MEROPS BULLOCKOIDES.*—SMITH.

AVES.—PLATE IX. (MALE.)

M. fronte subalbida; vertice pallidè cæruleo-viridi; cervice, pectore, abdomineque summo pallidè cinnamomeis; dorso, humeris, caudâque viridibus; caudæ tectricibus superioribus inferioribusque cyaneis; tæniâ per oculos nigrâ subtus albo-marginatâ; gulâ albâ; gutture coccineo; rectricium secundariarum apicibus nigris.

LONGITUDO, $7\frac{1}{2}$ unc.

MEROPS BULLOCKOIDES. South African Quarterly Journal, 1834.

COLOUR.—Front whitish; top of the head pale bluish green; the back and sides of the neck, the breast, and the belly, pale cinnamon brown; vent dirty green; back, wings and tail light grass-green; the upper and under tail coverts, and a spot on each side at the base of the thigh ultra-marine blue. The side of the head crossed by a deep black band, edged below with white, which colour also prevails on the chin; throat scarlet; the inner surface of the shoulder, and the edges of the inner vanes of quill feathers fulvous, the secondaries broadly tipped with black; the inner vanes of the tail feathers, with the exception of the two centre ones, margined with dull brown. Bill and claws black; legs and toes greenish black. Eyes crimson.

FORM, &c.—Bill broad at the base, slightly curved, the culmen carinated and moderately arched; nostrils oval and partially covered by recumbent wiry feathers or short black bristles. Wings, when closed, reach to about the commencement of the last third of the tail; the third and fourth quill feathers the longest, the second and fifth nearly equal, the first about half the length of the third. One or two of the tertiary wing feathers nearly as long as the primaries. The extremity of the tail square or very slightly rounded.

* So named from its general resemblance to *Merops Bullockii*.

MEROPS BULLOCKOIDES.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the wings when closed	4	6
point of the tail.....	7	6	of the tarsus	0	3½
of the tail	4	0	of the middle toe	0	3
of the bill from the angle of			of the hinder toe	0	2
the mouth.....	1	7			

The female resembles the male, with the exception that the colours are not quite so bright.

Between this species and *Merops Bullockii* many discrepancies might be instanced, but the diagnostic character, which will prove the most readily available, is the colour of the upper tail coverts. In the present species, this colour is invariably similar to that of the lower ones, whereas in *Merops Bullockii* it is very different.

It was not until the expedition attained the 25° of south latitude that this bird was discovered, though north of that it appeared not uncommon. When observed, it was generally either perched upon the tops of trees, along the immediate banks of rivers, or in the act of making short circuits through the air, apparently in chase of flying insects. As may be inferred from the structure of its wings, it is not a bird which flies for any great length of time without resting; it seeks its food during frequent low and short flights, and after each of these, often returns to the perch from whence it proceeded. In respect of its habits, as well as its wings, it closely resembles *Merops Erythropterus*, Lin.; but, in regard to both these characters, it differs from the other species of the genus yet observed in South Africa. Upon the modified structure of the wings in this species and *M. Erythropterus* may depend the circumstance of their being permanent inhabitants of the districts where they are found, and where they encounter a cold during the winter much more severe than ever occurs farther to the southward, and from which the *Merops Apiaster*, Lin. *M. Savignii*, Levaill. and *M. chrysolaimus*, Jard., fly towards the end of summer. From observations I have had occasion to make, I think it probable that the migrations, both of birds and quadrupeds, will be found often to depend more upon causes which have hitherto been comparatively overlooked, than upon any absolute deficiency of food in the countries from whence they retire. Connected with this opinion, I may instance the circumstance of a species of swallow, which inhabits the mountains of the Cape Colony during the summer months, repairing in the winter to the vicinity of houses left, by another species, on the approach of the cold season. It there finds food sufficient for its support, till the other species, gifted with more vigorous powers of flight, and a superior courage, returns and drives it back again to situations which it had for a time abandoned.



PTEROCLES VARIEGATUS.

PTEROCLES VARIEGATUS.

AVES.—PLATE X. (MALE.)—BURCHELL.*

Mas. P. fronte nigra; capite supra ochreo, nigro brunneoque variegato; mento, capitis lateribus striâque superciliari argenteo-griseis; collo supra, dorso, humerisque olivaceo-brunneis guttis albis sparsis; humerorum plumis quibusdam subrufis; corpore subtus rufo-brunneo abdomine pallidiori; gutture pectoreque guttis albis variegatis; tectricibus primariis remigibusque brunneis, horum interioribus albo-terminatis; rachidibus ad apicem brunneis, versus basin albis; rectricibus duabus intermediis olivaceo-brunneis, pogoniis externis rufo-albo-subfasciatis, reliquis brunneo-nigris; pogoniis externis rufo-albo-subfasciatis; apicibus omnibus pallidè ochreis; rostro unguibusque nigro-brunneis; oculis brunneis; pedibus livido-brunneis.

Fem. Mento, capitis lateribus striâque superciliari pallide ochreis; abdomine pallidè rufo-brunneo, albo fasciato; rectricibus nigro-brunneis sordidè albo-subfasciatis: coloribus reliquis fere ut in mari.

COLOUR.—Feathers immediately behind nostrils black; † upper surface of head mottled with longitudinal stripes of ochry-yellow and dark umber-brown; chin, sides of head, and a stripe over each eye, silvery-grey; bare space round eye light yellow. The upper surface of the neck, the back, the upper tail coverts, and the shoulders, light olive-brown, with a strong shade of yellow, and freely sprinkled with small round white spots,—one spot on the margin of each web; some of the shoulder feathers, particularly towards the wing coverts, intermediate between gall-stone yellow and reddish orange. The feathers of several of the parts enumerated are towards their bases either a light brown or an umber-brown, more or less glossed with grey, and it is only towards their tips that they exhibit the olive-brown tint. Primary wing coverts, and the primary and secondary quill feathers light umber-brown; all the primaries excepting the two or three outermost, tipped with white; some of the innermost tertiaries and the scapulars brown, glossed with grey, and tipped with greenish yellow, each vane marked with a round white spot; the shafts of both primaries and secondaries pure white, except towards their points, where they are of the same colour as the webs of the feathers. Secondary quill coverts wood-brown, glossed with grey, and tipped, and partially edged with white. Under-surface of the neck and the breast rufous brown, sparingly spotted with white; belly and inner surface of shoulders, and a stripe behind each eye, the same colour as the breast, only much paler; legs and under tail-coverts pale ochre-yellow. The two centre feathers of the tail olive-brown, partially barred with tawny white, the remaining feathers brownish black, with one or

* Travels in South Africa, vol. ii. p. 345.

† In some individuals the black is less intense, but in all the adult specimens of the species I have seen, it has always been very distinct.

PTEROCLES VARIEGATUS.

two partial tawny bars upon their inner vanes; the tips of all pale ochre-yellow. Bill and claws umber-brown; eyes dark brown; toes livid brown.*

Form, &c.—Typical. Bill short and slender; wings when folded, reach to within about half an inch of the point of the tail; first quill feather longest, and slightly exceeding the second; the remainder successively decrease in length; the longest of the tertiaries rather exceeding the length of the seventh primary quill feather; tail cuneated, the two centre feathers slightly prolonged beyond those on each side of them and acuminate; lateral toes equal.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the base of the bill to the			Length of the tarsus	1	1
tip of the tail.....	9	6	of the middle toe	0	9
of the tail	3	3	of the outer toe.....	0	6
of the wings when folded.....	6	5			
of bill from the angle of the					
mouth	0	7			

In the female, the chin, the sides of the head, and the stripe over the eyes is ochre-yellow, instead of silvery grey; the belly is pale yellowish brown, barred with dusky white; along its centre the first colour is often almost umber-brown; the feathers of the flanks are light brown tipped with white; all the tail feathers blackish brown, partially barred on both vanes with tawny white and tipped with ochre-yellow; elsewhere the colour of the plumage is nearly the same as in the male.

The first specimens of this species which we procured, were obtained at *Tsining*, about thirty miles to the westward of *Latakoo*. The habit of repairing to springs, or other collections of water, at fixed periods, to drink, is common to it, with the other species of the genus *Pterocles*. Early in the morning, between the hours of seven and nine, appeared to be the time destined for the present species to quench its thirst, and between those hours specimens were to be obtained in abundance, wherever water was accessible, both to the west and north of *Latakoo*. Like *Pterocles gutturalis*, they feed singly, or in pairs, and like the latter, congregate before they reach their drinking-places, and generally appear in larger flights, owing, no doubt, to the members of this species being more numerous. In their progress to and from these places of daily resort, in common with *Pterocles tachypetes*, Temm., *P. bicinctus*, Temm., *P. simplex*, Lesson, and *P. gutturalis*, they fly at a great height, and suddenly descend, when they approach the water, or their feeding grounds, and even on some occasions, the descent is not commenced before they are directly over the spot where it is their object to alight. On such occasions they require to form a semi-circular or circular movement before they can reach the desired spot. In the stomachs of this species were found seeds, small bulbs, and abundance of fine gravel.

* No two specimens of this species exhibit exactly the same intensity of tints, and often not even what would be described as the same colour.



ACCIPITER POLYZONOIDES

(Aves — Plate II)

ACCIPITER POLYZONOIDES.—SMITH.

AVES.—PLATE XI. (FEMALE.)

A. *suprà cinereus brunneo-umbratus, subtus albus; gulâ guttureque leviter fusco-subfasciatis; pectore abdomineque rubro-brunneo-fasciatis; capitis cervicisque lateribus pallidè griseis; remigibus primariis pallidè brunneis, pogoniis internis nigro-brunneo-fasciatis; secundariis griseis, pogoniis albo-marginatis et fasciis nigro-brunneis notatis; caudâ subtus albâ fasciis sex nigro-brunneis instructâ.*

LONGITUDO 13 unc.

COLOUR.—Above, pearl-grey shaded with brown, the latter colour particularly distinct upon the interscapulars: the feathers of the nape of the neck are pure white except at the points. Space below the eyes, ear coverts and sides of the neck dull pearl-grey; chin and throat white freckled with light brown, the latter colour in the form of short indistinct bars. Breast, belly and thighs white, closely banded with narrow, slightly undulated, reddish brown bars; vent and under tail coverts pure white. Shoulder coverts dark leaden grey, slightly tinged with brown; primary quill coverts dull blackish brown; the outer vanes of the primary quill feathers, and the last two-thirds of the inner vanes light brown, the first third white; each of the latter vanes are crossed by a number of black-brown bars amounting on the longest feathers to ten or eleven in number; the secondaries pearl-grey, the inner vanes broadly edged with white in addition to being crossed by several narrow black-brown bars. The two centre feathers of the tail and the outer vanes of the remainder pearl-grey, faintly flushed with brown; the inner vanes white, and all the vanes excepting the outer one of the outermost feather of each side crossed by six black-brown bands, the one nearest the point the broadest; on several of the inner vanes more or less of the spaces between the bands are of the same colour as the outer vanes; the tips of all the feathers white. The cere and legs light saffron yellow; bill and claws brownish black, the edge of the upper mandible near the angle of the mouth, and the base of the lower one dull yellow. Eyes bright orange.

FORM, &c.—Typical; bill strongly arched from the base, and considerably compressed; festoon of upper mandible only slightly developed; tarsi and toes moderately robust, the divisions of the plates and scales of the former scarcely perceptible; the inner toe rather longer than the hinder one; the claws much curved, slightly compressed and pointed. The wings when folded reach rather beyond the first half of the tail; the fourth quill feather rather the longest, the third and fifth a little shorter and nearly of equal length. Tail long and slightly rounded at the point.

ACCIPITER POLYZONOIDES.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tail	6	0
point of the tail.....	13	0	the tarsus	1	9
of the bill to the angle of the			the outer toe	0	7
mouth	0	10	the middle toe.....	0	10½
of the wings when folded.....	7	9	the inner toe.....	0	6

The *male* is rather smaller than the female, but the colours are nearly alike.

Only a few specimens of this species were obtained, and those to the north of 26° south latitude. Their manner of flight was exactly that of the common sparrow-hawk, and they frequented principally the banks of rivers where small birds, upon which they appeared chiefly to depend for their food, were abundant.

There are three South African species of the genus *Accipiter*, with which the present species may, at first sight, possibly be confounded. From the first, *Accipiter polyzonus*, Temm., it is readily to be distinguished merely by its inferior size, and the lighter tints of its upper plumage, but should more definite diagnostic characters be required, they will be found in the colouring of the tail. In *A. polyzonus* almost the whole colour of the tail consists of three dark transverse bands; those of the inner vanes of the two middle feathers being distinctly edged, anteriorly, with pure white. From the second, *A. gabar*, it will at once be distinguished by its wanting the white rump; and from the third, *A. minulus*, by its superior size, and by the bands of its tail being more numerous: In *A. minulus* there are only three bands, each of which is very broad.

These three, however, are not the only species with which it may possibly be confounded; there is another belonging to the East Indies, to which it approaches even more closely; indeed, the resemblance between them is so great, that we were at first disposed to regard them as identical. Upon close examination, however, we were able to detect many discrepancies. The characters of the species discovered by the Expedition, having been already given, we shall, therefore, only instance certain appearances of the *Accipiter Desumierii*, the name given to the Indian form by Temminck,* and leave the reader to refer to the description of the corresponding parts of our species. In *A. Desumierii*, the bill is rather large for the size of the bird, and is broad and convex, particularly towards the base; the cere is livid; the festoon is much developed, and marked with a large yellow blotch; the eyebrows and space in front of the eyes are white; the sides of the head, the ear coverts, and the sides of the neck are light rufous, the two first slightly mottled with short delicate brown stripes; the chin and throat are white, with a dark central line; the breast and belly are banded with rufous. The wings when folded do not reach so far as the first half of the tail; the bands of the tail are narrow, and in adult specimens rarely extend across the outer vanes; the two middle tail feathers are of a uniform grey colour, and without any appearance of bands; the tarsi are two inches and two lines in length.

In addition to the species here figured, the following specimens of the genus *Accipiter* occur in South Africa.

Accipiter polyzonus. Falco polyzonos, Temm.

Accipiter gabar. Le Gabar, Levaill. Ois. d'Afrique, pl. 33.

Accipiter niger. Sparvius niger, Vieill. Gal. des. Ois. pl. 22.

Accipiter tachero. Le Tachero, Levaill. Ois. d'Afrique, pl. 24.

Accipiter minulus. Le Minule, Levaill. Ois. d'Afrique, pl. 34.

Accipiter rufiventris. Falco exilis, Temm. Pl. col. pl. 496.

* Planches colores, Plate 496.



FRANCOLINUS SWAINSONII
W. P. L.

FRANCOLINUS SWAINSONII. — SMITH.

AVES.—PLATE XII. (MALE.)

F. capite griseo-brunneo; mento, gutture, spatioque circa oculos denudatis et rubris; colli partibus superioribus, lateralibusque nigro-brunneis strigis albis variegatis; corporis partibus superioribus pallide flavo-brunneis strigis lineisque instructis; partibus inferioribus flavo-griseis strigis brunneis notatis, abdominis plumis præterea strigis castaneis; remigibus primariis, secundariisque pallidè brunneis, harum marginibus externis subochreis brunneo-variegatis; caudâ subochreâ, lineis brunneis variegatâ.

LONGITUDO 14 unc.

PERDIX SWAINSONII, Rep. of Exped. App. page 54, June 1836.

COLOUR.—The tints of this bird are of a dull and somewhat sombre cast. The chin, the throat, and a space round the eyes, are bare, and of a colour intermediate between lake and vermilion red; the top of the head is broccoli-brown; the upper and lateral parts of the neck umber-brown, or blackish brown, with white variegations, the latter in the shape of short narrow stripes, one upon the outer, and another upon the inner edge, of each feather. The interscapulars, back, and shoulders, pale yellowish brown, more or less glossed with grey, and each feather has a dark stripe in the course of the shaft, and some fine brown undulations, or narrow oblique lines upon both vanes. Under parts a rusty, or yellowish grey, the breast and lower part of the neck darkest, and each feather is marked, in the course of the shaft, by a dark umber-brown stripe, which increases in width towards its hinder extremity; in some lights many of the feathers appear distinctly margined with silvery grey: the feathers of the belly are each marked, besides, by four additional narrow stripes, two upon the outer edge of each vane, the outermost stripe bright chesnut, the innermost yellowish white, and not always very distinctly defined: the feathers of the flanks, thighs, and vent, have only the central brown stripe, but the vanes are finely mottled with minute brown dots, or delicate undulated lines. The primary wing coverts are umber-brown; the primary and secondary quill feathers yellowish brown, the vanes of the latter towards their outer edges, and most of the tertiaries dusky buff, finely mottled, or undulated with brown. Tail dusky buff, freely variegated with oblique, waved, narrow brown lines. Upper mandible dark horn colour; eyes dark brown; legs, toes, spurs, and nails, greenish-brown.

FORM, &c.—Typical; bill lengthened, strong, and considerably arched, with the edges of the upper mandible overlying the lower, and inclosing it. Chin, throat, and space round the eyes, denuded of feathers, and slightly

FRANCOLINUS SWAINSONII.

wrinkled. Wings when folded reach nearly to the commencement of the last half of the tail; the first quill feather very narrow and spurious, the fourth, fifth, sixth, seventh, and eighth, nearly of equal lengths, and the longest, the second about an inch and a half shorter than the third, and nearly intermediate between it and the longest feathers; some of the tertiaries rather exceed, in length, the longest primaries. Tarsi, and toes, moderately robust, each of the former armed with two spurs, the lowermost long, slightly curved, and pointed, the uppermost about a line and a half in length, and blunt at the point; outer toe rather longer than the innermost one; scales on the hinder parts of the tarsi small, when compared with those in front.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tail	3	6
end of the tail	14	0	of the tarsus	2	10
of the bill from the angle of			of the middle toe	1	5
the mouth	1	3	of the outer toe	1	1
of the wings when folded	8	3			

The *female* has no spurs to the tarsi, but in other respects she closely resembles the male.

The first specimens of this Francolin were discovered in a valley immediately south of Kurichane, and at a time when they (five in number,) were perched upon the branches of a decayed tree, near the margin of a small rivulet. To trees so circumstanced, these birds generally repair, on the approach of night, and there remain till the break of day again invites them to their feeding places, which are commonly the immediate banks of rivers. Among the grass which clothes such localities, these birds wander during the greater part of the day, and when they are surprised in their retreats, they run with considerable speed, and unless when sharply pressed, generally prefer that manner of effecting their escape to flying. The slightest alarm causes them to bend their course towards the jungle, in the densest parts of which they conceal themselves until the danger is passed, and on such occasions they not unfrequently perch upon shrubs which are fully covered with foliage. When feeding, particularly in the morning, early, and also occasionally towards evening, they utter their harsh and frequent calls, and these are often responded to by others of the species, who may be scattered at a distance in the surrounding valleys. They feed upon small bulbs and insects, and also swallow a considerable quantity of gravel.



FRANCOLINUS NATALENSIS .

(Aves . Plate 13.)

FRANCOLINUS NATALENSIS.—(SMITH.)*

AVES.—PLATE XIII. (MALE.)

F. capite suprà brunneo, fusco-tæniolato; fronte superciliis, capitis lateribusque albis, maculis brunneis notatis; cervice colli lateribusque brunneis albo-strigatis; dorso humerisque flavo-brunneis, fusco subochreoque variegatis; mento albo, brunneo-notato; gutture, pectore, abdomineque nigro-brunneis; fasciis maculisque albis atque irregularibus variegatis, plumis albo-marginatis. Caudâ flavo-brunneâ, fusco-tæniolatâ; rostro rubro-aurantio; pedibus aurantiis; oculis fuscis.

LONGITUDO 13 unc.

COLOUR, &c.—The upper surface of the head dark wood-brown, finely barred with umber-brown; the front, the eyebrows, and the sides of the head white and closely speckled with umber-brown; space immediately behind each eye, and the ear-coverts light brown; back and sides of the neck dark umber-brown, and variegated with short white streaks, from most of the feathers being edged with white: some of the feathers of these parts are marked, besides, with one or more imperfect white bars, and many of them have the shaft of a bright chesnut hue. Back and shoulders yellowish brown, and freely variegated with umber-brown and sienna yellow markings:—the umber-brown in the form of longitudinal stripes along the middle of the feather, and of delicate, zig-zag bars across the vanes:—the sienna yellow, between the bars, disposed in the form of small stripes and irregular blotches. The under parts are mottled-white and blackish brown: on the chin and upper part of the throat, white is the predominant colour, and the dark markings consist of small oval spots, one near the centre of each feather: on the breast and belly the light and dark colours are nearly in equal proportions, the central portion of each feather is black-brown, more or less completely broken into angular bars by a series of irregular white spots which occur on each side of the shaft, the margins and tips of all the feathers white; vent and under tail-coverts pale yellowish brown, variegated with imperfect rusty-white and umber-brown bars; thighs rusty-white, irregularly barred with pale brown. Primary quill coverts and the quill-feathers broccoli-brown:—the outer vanes of the former and of some of the primary quill feathers finely freckled with pale cream-yellow; the outer vanes of the innermost primaries partially barred with light yellowish brown, and the inner vanes faintly and sparingly speckled with the same colour; the secondary and most of the tertiary quill feathers yellowish brown, each with several broad umber-brown bars, the spaces between which are crossed by numerous undulated lines of umber-brown. Tail light yellowish brown, crossed with numerous fine zig-zag umber-brown lines. The culmen between the nostrils, the membrane covering the latter, and the edges of the mandibles

* South African Quarterly Journal, 2nd Series, No. I. Part ii. page 48. November, 1833.

FRANCOLINUS NATALENSIS.

towards the angles of the mouth greenish yellow ; the remainder of the bill intermediate, between yellow and reddish orange. Legs, toes, claws, and spurs orange yellow ; eyes dark brown.

FORM, &c.—Typical. Bill moderately thick, and the upper mandible considerably longer than the lower, rather broad and flattened at the tip, culmen strongly arched. First quill-feather rudimentary, the fifth, sixth and seventh of equal length, and longest ; the fourth, third, and second diminish successively in length. Wings, when folded, reach to about the commencement of the second-third of the tail. The tail is slightly rounded. Legs and toes strong ; the hinder part of the tarsus above the spur is covered with two rows of moderately large and nearly circular scales. Spur single, rather short, and situated nearer to the hinder toe than to the knee-joint.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to the			Length of the tail	3	6
tip of the tail	13	6	of the tarsus	2	8
of the bill from the angle of			of the middle toe	1	0
the mouth.....	1	3	of the hinder toe	0	5
of the wings when folded	6	8			

In the adult *female* the colours are nearly similar to those of the male. She is readily to be distinguished from the latter, by wanting the spur of the tarsus.

Specimens of this species were found, though not in great numbers, on the banks of several of the rivers towards the tropic of Capricorn. They appeared only to frequent the jungle, and wherever they were disturbed in localities where the bush was scanty, they instantly retreated towards situations better calculated for concealment.

In 1831, I found specimens of the same species, both to the eastward and westward of Port Natal, and in those situations no individuals were ever seen beyond the jungle ; the present, like the other South African species, feeds upon small bulbs, seeds, and insects, and generally roosts during the night upon trees.

Though I have adopted the subgenus *Francolinus*, and referred to it all the Cape species, on account of the males being supplied with one or more spurs to the *tarsi*, yet I am nevertheless convinced it will eventually be found necessary to sink that subgenus, as permanent characters are not to be found which will enable us to distinguish female Francolins from Partridges.

South African Species of the Genus.

Francolinus clamator	<i>Temm.</i>	Francolinus pileatus	<i>Smith.</i>
Francolinus midcollis	<i>Temm.</i>	Francolinus Natalensis	<i>Smith.</i>
Francolinus Afer	<i>Temm.</i>	Francolinus subtorquatus	<i>Smith.</i>
Francolinus Levallantii	<i>Lesson.</i>	Francolinus Gariensis*	<i>Smith.</i>
Francolinus Swainsonii	<i>Smith.</i>	Francolinus adpersus	<i>Waterhouse.</i>

* A figure of this species will be given in an early number.



FRANCOLINUS PILEATUS

(Aves. Plate 14)

FRANCOLINUS PILEATUS.—SMITH.

AVES.—PLATE XIV. (MALE.)

F. capite suprâ sordidé grisco, brunneo variegato; interscapularibus, cervicis parte superiore lateribusque lucidè rubro-brunneis, partis superioris plumis in medio albo strigatis, laterumque albo-marginatis; dorso flavo-grisco, brunneo-umbrato; remigibus primariis secundariisque brunneis, harum marginibus exterioribus albis, illarum versus basin subochreis; strigâ supra subtusque oculos albâ; pectore, ventreque pallidè ochreis, hoc fasciis gracilibus brunneis, illo maculis rubro-brunneis notatis; pedibus aurantiis.

LONGITUDO 13 unc. 6 lin.

PERDIX SEPHAENA, Rep. of Exped., page 55, June 1836.

COLOUR.—The upper surface of the head is rusty grey, clouded with brown; but the extent to which the brown appears depends upon the position of the feathers. When the latter are disposed in their natural order, little of the brown colour is seen; but when they are deranged, and their brown bases exposed, then the proportion of the latter colour is considerable. The back and sides of the neck, together with the interscapulars, are intermediate between brownish orange and reddish brown; the feathers of the former are broadly margined with white, and those of the latter are marked each with a broad white stripe along the centre; in some of them the stripe is divided longitudinally by a narrow black line, and in others it is margined on each side by a brownish stripe. Back and upper tail coverts yellowish grey; the former faintly clouded with brown, and the latter delicately mottled with very fine transverse lines of the same colour. Shoulders hair-brown, several of the feathers broadly edged with reddish brown, and all marked with a white stripe in the course of the shafts. Primary quill coverts and primary and secondary quill feathers chocolate brown, with yellowish white shafts; the outer vanes of the primaries, towards their bases, margined with pale sienna yellow, or light reddish brown; and those of the secondaries, throughout their whole length, with white. Over each eye, a white stripe, which terminates at the nape of the neck, and beneath the eye another, which ends before the ear coverts. These stripes, in front of the eye, are separated from each other by a dark brown blotch. The chin, throat, and cheeks, white; the two latter delicately spotted with pale reddish orange; the breast and belly cream-yellow, the former marked with large, fawn-shaped, dark reddish brown spots, and

FRANCOLINUS PILEATUS.

the latter is closely barred with delicate undulated brown lines ; the vent and under tail coverts a pale ochry yellow, sparingly barred with zigzag brown lines. The two central tail feathers light reddish brown, closely mottled with delicate waved brown bars ; the remaining feathers dark umber-brown, except the outer vanes towards the quills, which are reddish brown freckled with indistinct lines of a darker shade. Bill dark horn-coloured ; eyes reddish brown ; tarsi and toes pale Dutch orange ; claws and spurs a pale horn colour.

FORM.—Typical ; bill broad at the base, narrow and curved towards the point ; wings rounded, and when folded reach a little beyond the base of the tail ; the fourth and fifth quill feathers equal, and the longest, the third and sixth but little shorter, the second and first successively shorter ; tail slightly rounded. Tarsi and toes strong ; the former with a vertical row of large plates behind, which extends from the knee joint to the strong cylindrical spur with which each tarsus is armed ; the spur is situated rather nearer to the hinder toe than to the knee joint, tapers from the base, and is slightly curved, the convexity directed downwards ; the inner toe slightly longer than the outer.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to the			Length of the tarsus	1	7
tip of the tail.....	13	6	of the middle toe	1	3
of the bill from the angle of the			of the inner toe	1	0
mouth	1	0	of the hinder toe	0	3½
of the wings when folded.....	6	6			
of the tail	4	0			

The *female* has no spurs to the tarsi ; in other respects she exhibits a close resemblance to the male.

On the immediate banks of the Marikwa river, which flows in a north-easterly direction from Kurichane, we discovered the first specimens of this handsome Francolin. It showed but little disposition to resort to the jungle, though when disturbed in the more open localities, which it by choice frequents while feeding, it, like the last species, seeks concealment in the bosom of the thickets. Early in the morning specimens were observed, in moderate abundance, upon the open grassy plots which occurred, intersecting the wooded regions that skirted both sides of the stream, and there they appeared to find their food in plenty, which was found to consist of small bulbous roots, seeds, insects, &c. To the same localities these birds were also observed to resort towards evening ; but at that period they were less readily discovered, owing to their being commonly more silent at that time. During the middle of the day they were rarely observed, and from what was ascertained there were grounds for believing they repose while the sun is warm, and that while enjoying rest, they are generally perched upon dwarf trees or shrubs, no doubt to be the more secure from the teeth of the numerous predatory quadrupeds which are constantly traversing the woods in quest of prey.



FRANCOLINUS SUBTORQUATUS
(Aves — Plate 15)

FRANCOLINUS SUBTORQUATUS.—SMITH.

AVES.—PLATE XV. (MALE.)

F. capite suprâ sordidè badio, griseo-umbrato et maculis brunneis variegato; cervicis parte superiore lateribusque ochreis; dorso, caudâque sordidè subrufis brunneo-fasciatis; plumarum rachidibus albis; oculo inter tœnias duas nigras, superiore post aurem desinente inferiore ad guttur porrectâ, et cum inferiore lateris adversi lunulam formante; gulâ, guttureque subflavis; pectore, abdomineque subalbis brunneo-fasciatis; rostro sordidè brunneo; pedibus flavis; oculis rubro-brunneis.

LONGITUDO 10 unc.

PERDIX COQUI, Rep. of Exped. page 55, June, 1836.

COLOUR.—The upper aspect of the head rufous brown, faintly clouded with lavender purple, and obscurely spotted with dusky brown; the eyebrows, the bases of the ear coverts, and the back and sides of the neck, towards the head, pale ochry red; the tips of the ear coverts bright rufous, and the feathers immediately surrounding the angles of the mouth rusty white. The side of the head is crossed by two fine black lines, the one above, the other below the eye; the former terminates on the side of the neck, about three quarters of an inch behind the ear coverts; the latter, which has its origin at the angle of the mouth, descends towards the throat, and, with the corresponding one of the opposite side, forms a narrow lunated collar across the throat. The lower part of the neck, in front of the interscapulars, clear rufous, with some of the hindmost feathers tipped faintly with white, in addition to being marked with a brown bar upon each vane; the ground colour of the back, the shoulders, the secondary quill coverts, the tertiary quill feathers and the tail, intermediate between rufous and clear rufous brown, with each of the feathers of the back marked by a rusty white stripe in the course of the shaft, and by several broad, incomplete dark brown bars on each vane; the centre of some of the bars much lighter than the circumference. The shoulder feathers and the secondary wing coverts are variegated somewhat in the same manner, only much more delicately, the centre stripes being very slender, and the transverse bars narrow and less distinctly defined;—several of the coverts are, besides, tipped with a yellowish white colour. The tertiary quill feathers are marked, either with uniform black-brown bars, or with a series of brown blotches upon each vane, the circumferences of which are much darker than the centres; the tail is also barred nearly after the same fashion. The primary wing coverts and the primary and secondary quill feathers are pale umber brown, the outer vanes of the

FRANCOLINUS SUBTORQUATUS.

latter barred with rufous ; the inner surface of the shoulders and wings rusty ash-grey. The under part of the neck, the breast, and the belly, rusty white and freely variegated with slightly curved, umber-brown bars. (In specimens of a certain age the sides, or even the whole of the breast, is rufous, with the bars narrower and less distinct);—the thighs, the under tail coverts, and the vent pale rufous, the latter only finely barred with brown. The upper mandible towards the angle of the mouth, and the whole of the lower towards its base, greenish yellow ; the remainder of both mandibles and the claws blackish brown ; the tarsi, the toes, and the spurs dull yellow. Eyes reddish brown.

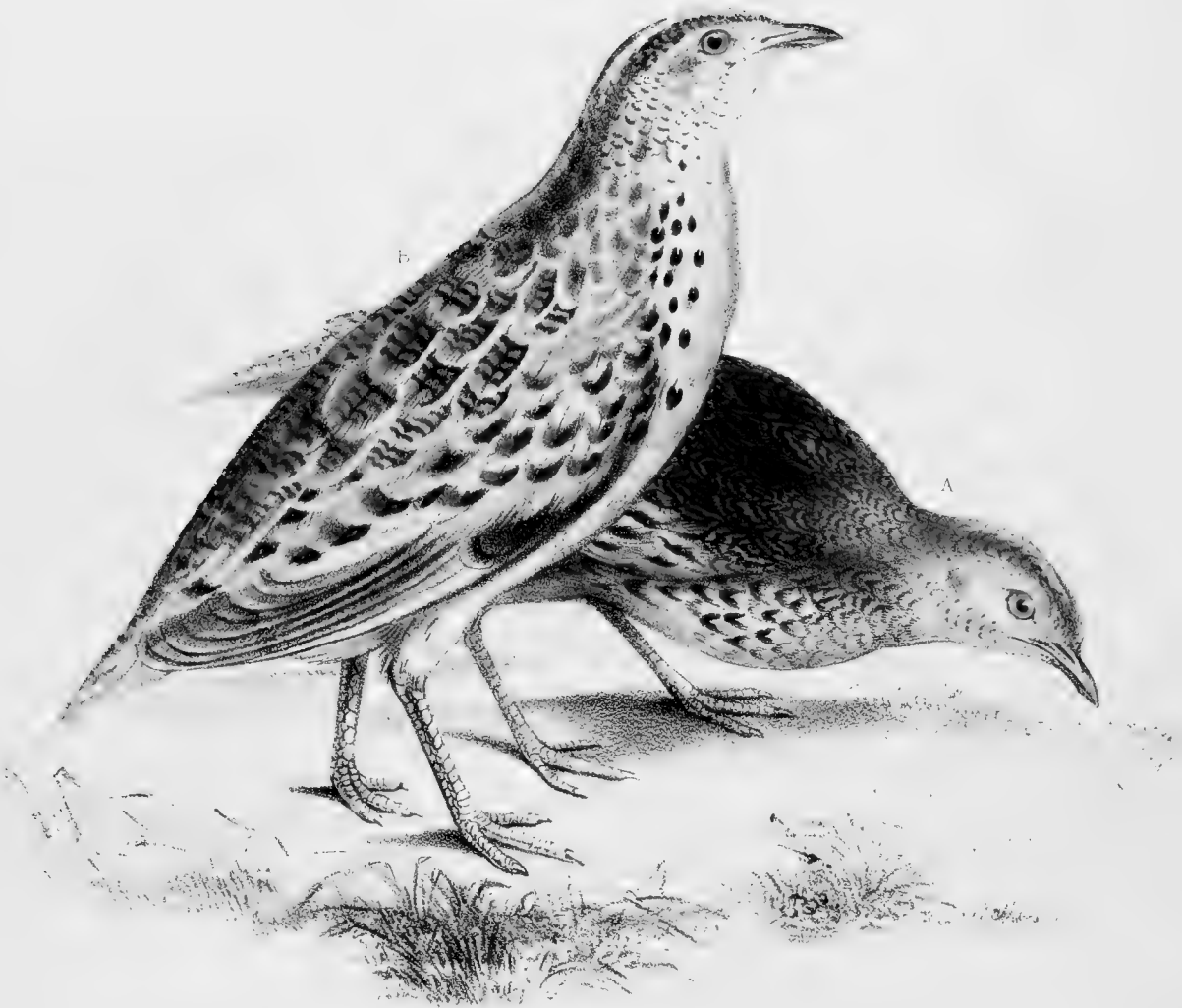
FORM. — Figure slender ; the head small and the neck rather long for the size of the bird ; bill moderately strong, slightly curved, broad at the base and rather narrow at the point ; feathers of front narrow and rigid ; the wings, when folded, extend nearly over the first half of the tail ; the first quill feather is very small, the fifth and sixth are nearly of equal length and longest, the fourth and seventh equal and rather shorter than the last two ; the third and eighth of the same length, but not quite equal to the fourth, and only a very little longer than the second : some of the tertiaries equal in length to the longest primaries. Tail full and slightly rounded ; tarsi moderately robust and coated behind with two rows of large flat scales ; the toes are short, the hinder one very slender ; each tarsus armed with a single spur, which is very short, blunt at the extremity, laterally compressed, and situated about two lines above the hinder toe.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines
Length from the tip of the bill to the			Length of the tarsus	1	6
extremity of the tail	10	0	of the middle toe	0	9
of the bill from the angle of			of the outer toe.....	0	6½
the mouth.....	0	10	of the inner toe	0	4½
of the wings when folded.....	5	3			
of the tail	2	6			

The *female* is without spurs to the tarsi ; in other respects she exhibits a close resemblance to the male.

The few specimens of this species which we obtained were killed near to the tropic of Capricorn, and were found upon the bases and slopes of low stony hills, which were thickly covered with fine brushwood. Among the brushwood, and between the large stones with which the surface of the hills was strewed, these partridges principally sought their food ; and though they occasionally resorted to the plains, they generally manifested a disposition to retreat to the hills, whenever they were molested on the latter. Having once reached the localities, which it appeared they considered the best constituted to ensure them safety, they could not, without much exertion, be driven from them ; and from their holding their ground with such pertinacity and manifesting such a determination to avoid flight, we lost several individuals which otherwise would probably have been secured.



HEMIPODIUS LEPURANA A. Male. B. Female
(Aves — Plate 16)

HEMIPODIUS LEPURANA.—SMITH.

AVES.—PLATE XVI. (MALE AND FEMALE.)

Mas.—suprà pallidè rufus, lineis nigro-brunneis undatis variegatus; interscapularibus albo-marginatis; gulâ albâ; pectoris abdominisque lateribus lactifloreis,* plumis versus apicem maculâ brunneâ sagittatâ; pectore in medio nitide rufo; abdomine albo. Oculis pallidè rubro-flavis; rostro pedibusque pallidè lilacinis flavo-umbratis.

LONGITUDO 5 unc.

Fem.—cervicis parte posteriore pallidè cinnamomea albo-striata; interscapularibus dorsoque nigro-brunneo, rufoque fasciatis et albo-striatis; pectoris lateribus maculis ovatis brunneis longitudinalibus.

ORTYGIS LEPURANA, Rep. of Exped. App. page 55, June 1836.

COLOUR.—(*Male.*) Above, the ground-colour is intermediate between pale rufous and light chesnut; on the upper surface of the head the feathers are indistinctly barred with brown; on the neck, back, and shoulders, nearest to the body they are crossed by numerous slender black-brown bars, or irregular crescents, and some of the shoulder coverts are besides delicately margined with white. The eyebrows, sides of the head, and a stripe between the base of the bill and nape of the neck rusty white, the feathers of the two first finely tipped with brown. The inner vanes of the secondary quill coverts pale rufous; the outer vanes straw yellow inclined to white, and each of the latter is crossed obliquely near its point by a well defined brown bar, the inner extremity of which terminates in an acute point. Primary quill coverts dark brown; the primary and secondary quill feathers greyish brown, the outer vanes of the former finely edged with a pale buff colour, those of the latter broadly edged with cream yellow, and partially barred with the same colour. Tail pale rufous, and crossed by numerous delicate waved brown lines. Chin and throat dull white; the middle of the breast pale Dutch orange, with a few minute brown dots; sides of the breast and belly white, with a yellowish tinge, each feather with an arrow-shaped brown spot near its point; centre of the belly, and the thighs, white; vent, and under tail-coverts, very pale buff-orange; bill and legs pale lilac; eyes pale reddish-yellow.

FORM, &c.—Typical; bill moderately long and slender; in form approaching that of the smaller rails (*Porzana*, Vieill.); tail rather elongated, graduated and pointed; wings when folded reach nearly to the commencement of the last half of the tail; the first, second, and third quill feathers longest, and nearly of equal length; the tertiaries slightly shorter than the longest quill feathers; tarsi rather slender, in front coated with two rows of scales,

* Kirby's Introduction to Entomology, vol. iv. p. 287.

HEMIPODIUS LEPURANA.

and behind with one row ; toes short ; claws slender, and slightly curved. The thighs closely covered with feathers to the knee-joints.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	10
the tip of the tail.....	5	0	middle toe	0	3
of the bill to the gape	0	9	outer toe	0	4
of the wings when folded.....	3	0	inner toe	0	2 $\frac{3}{4}$
of the tail	1	9			

Female.—The crown of the head sparingly speckled with white dots, otherwise as in the male ; the back of the neck is pale cinnamon-brown, the feathers edged with white ; back a pale fawn colour, each feather crossed by several black bars, and each bar with a more or less distinct angular projection at the shaft of the feather, both before and behind, or simply behind ; secondary wing coverts pale cream-yellow, each, with an oblong deep brown spot on its outer vane, and a large irregular chesnut blotch on the inner one, continuous with the brown spot. Primary and secondary quill feathers brown, the two outermost primaries broadly margined with cream-yellow, the rest of the primaries and the secondaries delicately edged with pale rufous ; the tertiaries pale chesnut, barred with black, and here and there variegated besides with small and irregularly shaped white spots or stripes ; the middle of the breast as in the male, but the sides, instead of being marked with angular spots, have them of an ovate form, and placed longitudinally upon the feathers.

Only a very few specimens of this Quail were obtained, and these not until after the expedition had reached the country north of Latakoo. The grassy valleys south-east of Kurichane were the only localities in which they were discovered, and even in those they appeared to be very thinly scattered, for seldom was more than a single individual found in, or even near the same place. When they were disturbed, they seldom flew far before alighting, though after effecting that, it would appear they continued retreating, as none of those we succeeded in getting a second time on the wing, were ever found near the situations where they were observed to alight. The food of this species consists of seeds and small insects, and along with these they likewise swallow a considerable quantity of fine gravel.

In the Museum of the Army Medical Department, at Fort Pitt, Chatham, there are the male and female of an Indian species of *Hemipodius*, very closely resembling those we have here described. They differ, however, in so many minor points, that we feel disposed to regard them as belonging to a distinct species :—besides being rather smaller, the back of each is marked after a different fashion, and the spots on the sides of the breast, in the female, are ovate, and placed transversely, while in ours they are disposed along the middle of the feathers. In the catalogue of the Fort Pitt collection, we have named the Asiatic species *Hemipodius Sykesii*, in honour of Colonel Sykes, who has added so much to our knowledge of the Zoology of India.



CLIDA AZILLARIS

Aves. Foul-Mel.

VIDUA AXILLARIS.—SMITH.

AVES.—PLATE XVII. (MALE.)

V. nigra: humerorum partibus anterioribus aurantiis; alarum tectricibus axillisque flavo-brunneis; mandibulâ superiore nigrâ, inferiore albidâ; pedibus rubro-brunneis.

LONGITUDO 6 unc.

COLOUR, &c. -Velvet-black; the anterior portion of shoulder orpiment orange; wing coverts intermediate between yellowish brown and reddish orange, which is also the colour of the inner surface of the shoulders. Primary and secondary quill coverts black, their outer vanes delicately edged with light yellowish brown; quill and tail feathers black, with a greenish gloss; the outer vanes of most of the secondary and tertiary quill feathers towards their points narrowly edged with pale wood-brown, and several of the tertiaries are also tipped with the same colour. Upper mandible black; lower, bluish white; legs, toes, and claws dark reddish brown.

FORM, &c.—Bill strong, conical, and pointed, its sides slightly flattened; the under mandible larger than the upper. Wings when folded reach about an inch and a half beyond the base of the tail; the first quill feather rudimentary, the fourth, the fifth, and the sixth equal in length, and the longest, the second, third, and seventh rather shorter. Tail feathers unequal as to length, being in our specimen in different stages of growth, and in progress to form a long tail, which the males of this species evidently possess during the summer season. Tarsi strong, the division between the plates, in front, distinctly marked; toes strong, claws long, pointed, and slightly curved,—the claw of the hinder toe largest, and its form strongly indicating the office it is required to perform in assisting the bird in supporting itself on reeds, rushes, &c., upon which it usually perches. The inner and outer toes of equal length.

VIDUA AXILLARIS.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tail	2	6
end of the tail*.....	6	0	of the tarsus	1	0
of the bill from the angle of the			of the hinder toe	0	5
mouth	0	7	of the middle toe	0	9
of the wings when folded.....	3	0½	of the outer toe.....	0	6

Nothing is known of the female,—the probabilities are, she is of a brownish colour, and without the gay coloured epaulets so conspicuous in the male.

There is reason to believe this species of widow bird occurs but rarely in South Africa. The individual which our figure represents, was obtained upon the south-east coast, between seven and eight hundred miles to the eastward of Cape Town, and at the time it was shot, it was perched upon rushes growing out of some marshy ground in Caffreland.

South Africa furnishes us with a number of birds yet referred to this *Genus*, but it appears to me very doubtful if all of them will continue to be classed together. Those of the Cape admit readily of being divided into two sections,—indicated by the character of the plumage and habits of the species. The species of the first section have the summer feathers, in the males, soft and velvety, which is not the case in those of the other section; the former resort to marshy grounds, and feed and build their nests among reeds, or long rushes,—the latter principally frequent the vicinity of human dwellings, or occur in dry localities, thinly covered with wood, and when driven from grounds upon which they may be feeding, generally perch upon trees, or brushwood. The species of the first section, besides, have the bill stronger in proportion, and more elongated, than the species of the second.

1st Section.

<i>Vidua longicauda</i> ,	<i>Cuv.</i>
<i>Vidua lenocinia</i> ,	<i>Lesson.</i>
<i>Vidua axillaris</i> ,	<i>Smith.</i>

2nd Section.

<i>Vidua regia</i> ,	<i>Cuv.</i>
<i>Vidua serena</i> ,	<i>Cuv.</i>
<i>Vidua superciliosa</i> ,	<i>Cuv.</i>

* The tail in *the state* in which it existed in the specimen figured.



ASTOR MELANOLEUCOS. A. and B. juv.

PLATE 100.

ASTUR MELANOLEUCUS.—SMITH.

AVES.—PLATE XVIII. (FEMALE AND YOUNG MALE.)

A. capite, collo, humeris, pectore, abdomineque nigro-brunneis; dorso brunneo; remigibus primariis, secundariis que brunneis, pogoniis internis albo-fasciatis; caudâ suprâ brunneâ, grisea-tinctâ et fasciis quinque nigro-brunneis notatâ; rostro brunneo, flavo maculato; pedibus viridi-flavis; unguibus brunneis.

LONGITUDO 21 unc.

ACCIPITER MELANOLEUCUS, Smith, South African Quarterly Journal, Vol. I., page 229, June, 1830.

COLOUR.—Head, neck, and shoulders blackish brown; back and quill feathers dull umber-brown, the inner vanes of the latter crossed with many broad white bars; breast, belly, and thighs liver brown; upper surface of tail brown, with a gray tinge; lower surface white; and both marked by five transverse broad dark brown bands, the one near the points of the feathers widest; eyes yellow; bill rich brown; festoon of upper and base of lower mandible yellow; cere yellow, with a greenish tinge; legs and toes greenish yellow; claws brown.

FORM, &c.—Typical: figure robust; bill short and stout; culmen curved from the base; festoon well developed; legs very strong; outer and inner toes of moderate length; middle toe very long; tarsi shielded before and behind, and on the sides coated with small oval scales; claws very long, moderately curved and pointed; hinder and outer toes of the same length; wings, when folded, reach over the first two-thirds of the tail; the fourth and fifth quill feathers equal and longest; the first about two-thirds the length of the fourth; the third slightly, shorter than the fourth; the second about an inch shorter than the third; tail long, its tip slightly rounded.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus	3	0
end of the tail	21	0	of the middle toe*	1	1
of the bill from the angle of the			of the inner toe	1	11
mouth	1	1½	of the hinder toe	1	0
of the wings when folded	12	9			
of the tail	9	6			

* When it is not added that the claw is included, it is always to be understood that the measurement applies to the toe without the claw.

ASTUR MELANOLEUCUS.

YOUNG.—The top and sides of the head, and the back and sides of the neck dull umber-brown; the base and edges of each feather light yellowish brown; the umber-brown on the sides of the head and neck in particular appears almost disposed in longitudinal streaks. The back, shoulders, quill coverts, tertiary quill feathers brown, each feather tipped with yellowish brown; under parts white, shaded delicately with yellowish brown, and each feather streaked with umber brown in the course of the shaft; the streaks narrow, and broadest towards the points of the feathers; primary and secondary quill feathers brown, freely barred with white; the secondaries and several of the innermost primaries tipped with yellowish brown. Tail, above brown, below livid white, and on both aspects crossed by five broad dark brown bands; the two or three outermost feathers of each side have the spaces between the dark bars more or less clouded with tawny white; the tips of all the tail feathers are of the same colour. Bill blackish brown, with slight indications of yellow upon the festoon and the base of the lower mandible.

In specimens more advanced in age than the one represented in the plate, the upper parts are of a dull umber-brown, and the lower parts irregularly mottled, black and white.

The form and strength of the legs and bill of this species clearly entitles it to be ranked as an *Astur*, if we are warranted in forming such a genus. It is a bird rarely found in South Africa, and with its habits I am quite unacquainted. It occurs most commonly in districts covered with high wood; yet specimens have been killed not far from Cape Town, where nothing beyond a few dwarf trees existed.



OTIS AFROIDES A Male B Female
(Aves.—Plate 19.)

OTIS AFROIDES.—SMITH.

AVES.—PLATE XIX. (MALE AND FEMALE.)

O. capite nisi vertice et auribus, collo, corpore subtus, femoribus, fasciis duabus apud rectrices laterales, primariis partim et secundariis nigris; auribus, collari curto humerali, fasciâ alarum longitudinali, remigum (primo excepto) pogoniis majoribus mediis, tæniolâ tibiali apicibusque rectricum laterali-um albis; vertice brunneo fusco-striato; cristulâ albo nigroque variâ; interscapulio, tectricibus alarum superioribus, scapularibus et tertiariis brunneo-nigricante fuscoque undatim fasciatis; dorso, tectricibus rectricibusque caudæ nigris, albo nitidè lineatis: rostro flavo, apice brunneo; pedibus fuscis.

Femina. capite, collo, corpore suprâ et pectore superiori fusco-ferrugineis brunneo-nigricante prævè et densè striatis; mento, regione postparoticâ et pectore imo albidis; caudâ dorsali fusco brunneoque variatâ; fasciâ alarum albâ notâque albâ super remiges minus quam in mari conspicuis.

OTIS AFROIDES, Smith, Proceedings of the Zoological Society, Part I. p. 11, 1830.

COLOUR. — Forehead, supercilia, cheeks, chin, neck, breast, abdomen, thighs, flanks and under tail coverts velvet-black; crown of the head blackish brown, irregularly crossed and broken by cream-yellow lines, and fringed on either side with a white streak, which, passing backwards, blends itself with the black plumage of the occipital sub-crest; ear coverts and an irregular semicollar at the base of the neck posteriorly white; greater part of the dorsal aspect, including the scapular and interscapular plumage, tertiaries and superior wing coverts transversely undulated with bands alternately brownish black and ochre-yellow, the latter with a golden tinge in strong lights; these bands become broader towards the lower parts of the dorsal surface. Lower wing coverts, white, forming a broad band along the margin of the wing; first quill and greater part of the other primaries dull brownish black, but the basal and middle portions of the inner webs of the latter more or less patched, stained, or powdered with white; outer web of two or three of the inner secondaries either patched or striped with white. Back brownish black, finely barred with cream-yellow lines; superior tail coverts black, transversed with irregular white bands; four middle tail feathers brown, densely crossed by broken zig-zag cream-yellow lines, as well as by two black bands and the rudiment of a third near the tip; on the lateral tail feathers the markings nearly similar, but gradually changing into lighter brown and blueish white, the first band also disappearing, and the second and third becoming more developed, and of a more brilliant black; the tips of all the feathers white; colours of the inferior surface of the tail darker, black bands and intermediate markings more obscure; femoral plumage terminated by a white garter; axillary region black; inner surface of shoulder

OTIS AFROIDES.

white. Bill inclining to yellow, upper mandible largely, and lower scantily tipped with blackish; legs yellowish; claws blackish.

FORM.—Figure and general appearance of *Otis Afer*: head broad and flat above; neck very slender; wings when folded reach as far as the commencement of the last third of the tail; the second and third primary quill feathers of equal length, and the longest, fourth and fifth of equal length, and rather shorter than the second and third, first and sixth of nearly the same length, and about three quarters of an inch shorter than the second; some of the tertiaries and the longest primaries of equal length. Tail slightly rounded; thighs denuded of feathers for an inch and a half above the knee joint; carpal spur rudimentary and obtuse.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tail	4	7
point of the tail	19	6	of the tarsus	3	4
of the bill from the angle of			of the outer toe	0	10
the mouth	1	10	of the middle toe	1	4
of the wings when folded ...	11	0	of the inner toe	0	8½

FEMALE.—Ground colour of the dorsal plumage ochre-yellow, inclining to ferruginous, and variegated on the head by longitudinal, and on the sub-crest and neck by transverse blackish lines; back and wings profusely covered with brownish black markings, varying in form and direction*; upper tail coverts irregularly banded with brownish black and ochre-yellow; colours of tail feathers less bright than in the male, the broad bands being of a dull black, and the terminal white obsolete; white band on the wings and patch on the inner webs of the primaries inconspicuous. Chin cream-yellow speckled with blackish; patch behind the ears the same; ear coverts light ochre-yellow faintly streaked with brown; upper part of breast pale ochre-yellow waved with blackish brown lines, lower part cream-yellow; abdomen rusty black; feathers of thighs fringed with white at the tips: upper mandible dark brown, with sagittal horn-coloured band near the apex; lower mandible and legs rather paler than in the male.

When this species and *Otis Afer* are viewed together, many marked differences are immediately discoverable; but when an actual comparison cannot be instituted, a reference to the wings will under any circumstances enable the naturalist to refer his specimen to its proper species. In *Otis Afer* the quill feathers are entirely black, in *Otis Afroides*, more than half of each of the primaries is white. The species here figured inhabits the arid plains of the interior, and is never found much to the southward of the Orange River. Its call differs considerably from that of *Otis Afer*; but in most of their habits, &c. they closely resemble each other. The food of both is similar, and consists of insects, small snakes, seeds, &c.

* The colours of the female differ greatly according to age.



CALLINUS DOMESTICA - A. ANDERSON
A. 1870

GALLINULA DIMIDIATA.—TEMM.

AVES.—PLATE XX. (ADULT MALE AND YOUNG FEMALE.)

Mas.—*G. capite colloque castaneis; dorso, alis, (remigibus primariis secundariisque exceptis,) abdomine, caudâque nigro-brunneis, striis maculisque albis variegatis; remigibus brunneo-rubris. Rostro pedibusque pallidè rubro-brunneis.*

LONGITUDO $6\frac{1}{2}$ unc.

GALLINULA DIMIDIATA, Temm., Less. Manuel d'Ornith. tom. 1, page 537, 1831.

CREX RUFICOLLIS, Gray, Zoological Miscellany, page 13, 1831.

COLOUR.—Head, neck, and breast bright chestnut — the throat and breast lightest; back, shoulders, wing coverts, quill coverts, tertiary quill feathers, belly, upper and under tail coverts, and tail blackish brown, freely variegated with delicate longitudinal white streaks, and small white dots, the latter almost restricted to the quill coverts, the upper and under tail coverts, the vent, and the tail. Wherever the variegations consist of longitudinal white streaks, there are two on each feather, one on the outer, the other on the inner vane; behind the stripes, however, there are generally four white dots. (vide fig. *a*.) When again the variegations consist of dots, there are from two to three of those near the edge of each vane, at some distance from each other, and those of the one vane are situated opposite to the corresponding ones of the other. (vide fig. *b*.) Primary and secondary quill feathers brownish red; bill and legs reddish brown; the lower mandible faintly edged above and below with yellowish brown.

FORM.—Bill short and deep at the base, hence, when viewed laterally it has distinctly a triangular shape; head rounded; neck rather short and full; body rather robust; tail full and decomposed; thighs feathered almost to the knee-joints; tarsi rather strong, and the toes long for the size of the bird. Wings when folded scarcely reach beyond the base of the tail, the fourth and fifth quill feathers equal and longest, the second, third and sixth equal and slightly shorter, the first rather shorter than the second; the whole of the feathers loose and rather of a wiry appearance; tarsi in front coated with one row of plates, behind with two rows, of which the commissure is behind, bare space above knee-joints also coated with plates; outer and middle toe with a rudimentary web at their base; claws slender, slightly curved and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus.....	1	0
point of the tail	6	6	the middle toe.....	1	$0\frac{1}{2}$
of the bill from angle of mouth	0	$7\frac{1}{2}$	the outer toe	0	10
of the wings when folded	3		the inner toe.....	0	$9\frac{1}{2}$
of the tail	2	0	the hinder toe	0	3

GALLINULA DIMIDIATA.

YOUNG FEMALE.—The top of the head and the back of the neck umber-brown, variegated with spots of yellowish brown, generally four of these towards the tip of each feather, two upon the outer, and two upon the inner vane; the back, the shoulders, the primary and secondary quill coverts, some of the tertiary quill feathers, the upper and under tail coverts, and the tail dark liver brown, variegated with slender yellowish brown bars or dots; the bars are generally two or three on each feather, more or less undulated, and mostly interrupted at some part of their course, the variegations on the quill coverts, tertiary quill feathers, and tail are generally very few in number, sometimes they are entirely wanting. The chin tawny white, the sides of the head and neck, the throat, the breast and the belly umber brown, rather profusely marked with angular or curved bars of deep yellowish brown; the ground colour as well as the bars darkest on the sides of the breast and belly; towards the middle of these regions the tints are lightest, and the bars are generally indistinct. Primary and secondary quill feathers brownish red, and the outer vane of the first primary of each wing edged either with a series of delicate tawny white steaks, or a continuous line of that colour. The bill and legs dark reddish brown.

While examining this species, and the two others figured in this number, I had constantly before me twenty other species, which are considered by many authors as belonging either to *Gallinula*, or to *Crex* (*Porzana*, Vieillot); but as I could not discover any characters by which the limits of these two groupes could be satisfactorily fixed, I have deemed it better to regard those birds as forming in reality only one groupe. I was, indeed, able to select out of the whole number four, or rather five species, which differed materially from each other, viz. *Fulica chloropus*, Lin.; *Rallus Porzana*, Gm. Lin.; *Rallus crex*, Lin.; *Rallus pusillus*, Gm. Lin., and the species just described; and I doubt not, had I been unacquainted with any other species than those, I should have regarded the characters which they individually presented, as sufficient to warrant my viewing them as all belonging to different groupes; when, however, I compared their characters with those exhibited by the species from whence it had been necessary to separate them, in order to have definable peculiarities, such a number of intermediate modifications were observed, as rendered it impossible to say between what two species of the whole number the greatest *hiatus* existed, or where the lines of demarcation could be fixed.

Gallinula dimidiata is by no means a common bird in South Africa, though it is occasionally procured even in the neighbourhood of Cape Town. It frequents marshy situations, and resides among the reeds and long rushes, with which such localities generally abound, and where stagnant waters occur near its haunts, it is said to enter them, and to swim with facility, and even occasionally to cross them in quest of its food, which consists of insects, *mollusca*, &c. When walking or running it, like *Gallinula chloropus*, carries its tail erect.



GALLINULA JARDINII.
(Aves Plate 21.)

GALLINULA JARDINII.—SMITH.

AVES.—PLATE XXI. (MALE.)

A. capite, colli partibus superioribus lateralibusque, rufis; mento albo; dorso, humeris, gutture, pectore, abdomine, caudæ tectricibus superioribus inferioribusque nigro-brunneis, striis albis variegatis; remigibus primariis secundariisque griseo-brunneis; caudâ versus basin subnigrâ, versus apicem castaneâ; mandibulâ superiore rubro-brunneâ, inferiore nitidè flava; pedibus pallidè rubro-viridibus.

LONGITUDO $5\frac{1}{2}$ unc.

CREX JARDINII, Smith. Proceedings of the South African Institution, November, 1828.

COLOUR.—The head and the back, and the sides of the neck dark rufous; the chin white; the back, the shoulders, the secondary quill coverts, the tertiary quill feathers, the throat, the breast, the belly, and the upper and under tail coverts liver brown, varied with longitudinal white streaks, each feather with two streaks towards the point, one on the outer and the other on the inner vane; primary quill coverts and primary and secondary quill feathers grayish brown; tail, close to the base, dusky black, elsewhere bright chesnut, the tips of some of the feathers with a dusky or blackish tinge; upper mandible reddish brown; lower mandible greenish yellow; legs and toes light reddish brown.*

FORM, &c.—Bill slender and pointed; legs short; toes moderately long; claws short, slender, and slightly curved; figure slender; wings short and rounded, and, when folded, extend just beyond the base of the tail; fourth and fifth quill feathers equal and longest; third, sixth, and seventh, scarcely shorter; second about three lines shorter than the third; and the first about as many lines shorter than the second. Tail vertically compressed, bushy, and the feathers decomposed.

* The colouring assigned to the bill and legs is described from a preserved specimen.

GALLINULA JARDINII.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus	0	9
end of the tail.....	5	6	of the inner toe	0	7
of the bill from the angle of the			of the outer toe	0	7½
mouth	0	6½	of the middle toe.....	0	9½
of the wings when folded	2	9	of the hinder toe.....	0	3
of the tail	1	8			

Though I have never seen the *female* of this species, yet, from information I have received, I am disposed to believe she resembles the male in point of colours.

This elegant little rail is but rarely obtained by collectors in South Africa. The figure here given is a representation of the only specimen I have ever procured, though I remember having once seen another in the possession of a dealer in Cape Town. It resorts to marshy grounds, or the vicinity of lakes, and is occasionally to be seen flitting about among the reeds, by which the lakes are generally margined. It also at times extends its peregrinations upon the aquatic plants which sometimes coat the surface of stagnant waters; and while in such a position it appears actively engaged in feeding upon the aquatic insects which occur upon these plants.

Should *Alethelia* of Lesson prove a good groupe, and should the South African bird which Swainson has described under the name of *Alethelia lineata* * belong to it, then the present species must stand as *Alethelia Jardinii*, and that represented in Plate 20, as *Alethelia dimidiata*. I believe Swainson's bird to be the young of the latter.

* Lardner's Cyclopædia, Menageries, page 338.



GULLINULA ELEGANS.
(Aves Plate 22.)

GALLINULA ELEGANS.—SMITH.

AVES.—PLATE XXII. (MALE.)

G. capite, collo, pectoreque rufis; dorso, humerorum tectricibus, corporis lateribus, caudæ tectricibusque inferioribus nigro-brunneis, maculis ochreis ovatis variegatis; abdomine nigro-brunneo maculis albis notatis; caudâ brunneo-nigro fasciis rufis variis; remigibus brunneo-rubris, ad margines pogoniarum maculis ochreis, plus minus notatis; rostro pedibusque rubro-brunneis.

LONGITUDO 6 unc.

COLOUR.—The head, the neck, and the middle of the breast bright rufous, lightest on the throat; interscapulars, back, lesser wing coverts, sides of breast, flanks, vent, and under tail coverts liver brown, and variegated with a profusion of rather large and somewhat oval, reddish ochre-coloured spots—each interscapular feather generally with six or seven of these spots commonly disposed as represented on the Plate, letter *a*; middle of belly blackish brown, with spots similar in form and size to those on the back, &c. only pure white, except such of them as lie directly upon the dark ground colour,—these have a faint bluish tint. Primary and secondary quill coverts and tertiary quill feathers liver brown, with oval or irregular reddish ochre spots, and more or less broken and similarly coloured bars; quill feathers brownish red, the edge of each vane ornamented with a series of small irregular ochre-yellow spots; on the inner vanes of several of the feathers the spots are almost invisible;* inner surface of shoulders blackish brown with white bars;† inner surface of quill feathers pale brocoli-brown. Tail liver-brown, each feather with four or five bright rufous bars, the shape and appearance of which will be seen by reference to the Plate, letter *b*. Bill reddish brown, the lower mandible with a yellowish white line along the under edge of each *ramus*; legs and toes also reddish brown.

FORM.—Figure rather plump; bill considerably shorter than the head, and

* As far as my experience goes, little importance is to be attached either to the presence or absence of spots upon the quill feathers in birds of this genus. The law of nature, as it affects this group, seems to be in favour of irregularity in that respect, since we frequently find in the same individual some of the quill feathers spotted, and others without spots; nay, specimens occasionally present themselves without spots on any of the quills, while others, evidently of the same species, have a proportion of spots on each of the feathers.

† In some specimens of this species which I have examined, small white spots existed in the place of bars.

GALLINULA ELEGANS.

moderately slender ; * wings rounded, and when folded, reaching to the commencement of the last third of the tail ; the third, fourth and fifth of equal length, and the longest ; the sixth and seventh are slightly shorter, the second is about half an inch shorter than the longest quills, and nearly equal with the ninth, the first three quarters of an inch shorter than the second. Tail slightly graduated, pointed, and composed of regularly formed feathers, the webs not at all decomposed. Thighs covered with feathers almost to the knee joints ; tarsi moderately robust, in front with a single row of large plates, behind with two rows of rather irregularly formed scales ; middle toe internally has a well-marked membranous edging.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the tip of the bill to the			Length of the tarsus.....	1	0
end of the tail.....	6	0	the outer toe.....	0	10
of the bill, to the angle of the			the middle toe.....	1	0
mouth.....	0	9	the inner toe.....	0	9
of the wings when folded.....	3	6	the hinder toe.....	0	3½
of the tail	1	6			

I had long been in possession of specimens of *Gallinula dimidiata* and *Gallinula Jardinii*, before I obtained a specimen of the present species ; and it was not until I procured it that I was induced to sink the subgenus which I had characterised to receive the two first-named species. The characters of the subgenus were derived principally from the form which the tail exhibited in both species, and from the peculiarity of the texture of its feathers, though other minor peculiarities were not overlooked. Upon procuring *Gallinula elegans*, however, I found it possessed all the characters of my subgenus, with the exception of those derived from the tail, and that it differed in no essential point from those for which the new division had been established, except in having the tail feathers undeveloped and placed horizontally : the three *species* are therefore here figured, as in my opinion all appertaining to the same group.

Gallinula elegans is a rare bird in South Africa, and comparatively but few individuals have yet been obtained. All the specimens I have seen were procured near the south-east coast, in the direction of Port Natal, and were killed upon or near to the margin of stagnant waters, which were densely fringed with reeds or strong rushes, among the one or other of which they were discovered flitting to and fro in quest of food.

* The bill in this species is not uniform as to length ; in some individuals I have seen it much shorter than it is in the specimen here figured, much deeper at the base, and when viewed laterally, exhibiting more of a triangular form. The naturalist, who is not a slave to theory, will soon find that if he depend either upon the forms or measurements of individual organs for his specific characters, he will, in time, have to sink many of his species ; both, however, are useful as auxiliary characters.



VANELLUS LATERALIS.
(Aves. Plate 23)

VANELLUS LATERALIS.—SMITH.

AVES.—PLATE XXIII. (MALE.)

V. cervice, dorso, uropygio, tertiariis et scapularibus fusco-brunneis viridi-metallico delicatè intinctis; alarum tectricibus, pectore et abdomine columbinis; tegminibus tiliarum griseo-brunneis; fronte, mento, pogoniis primariorum internis versùs basin, secundariis præter apices, caudâ (fasciâ penultimâ exceptâ), lateribus, tectricibus alarum internis, tibiis, caudæ tectricibus, crissoque albis; gulâ, primariis nisi ad basin internam, secundariis ad apices, et fasciâ latâ caudæ penultimâ nigris; collo laterali-inferiore nigrescente, plumis albidò latè marginatis: carunculâ antè oculos flavâ, lobulo superiori rubente: rostro tibiisque viridi-flavis, illo apice nigro: calcari carpali et unguibus nigris.

LONGITUDO 13 un. 6 lin.

COLOUR.—Front of the head white with a brown margin spreading over the vertex; back of neck, interscapulars, back, rump, scapularies and tertiary quill feathers wood brown tinged and glossed with metallic green, the feathers on the back of the neck faintly streaked with brown. Primary quill feathers (except the base of the inner webs) and the tips of the secondaries pitch black; remainder of these last and the base of inner webs of primaries white. Tail feathers white on both aspects, except a very broad penultimate band of glossy black; the tips of the two centre feathers wood brown; chin white; throat black; feathers of the under and lateral parts of the neck blackish brown broadly margined with dirty white; breast and abdomen dove colour; flanks and femoral coverts dark grey brown, obsoletely fringed with grey; upper half of inner surface of wings, thighs, vent and under tail coverts white; inferior lobe of ante-ocular caruncle yellow, the superior lobule orange-red. Bill and legs greenish, the former broadly tipped with pitch black; carpal spur and claws blackish.

FORM.—Body moderately robust; bill long and rather thick at the base; nasal fossa well marked and terminating at the commencement of the last third of the upper mandible; nostrils linear, and situated about half way between the base and the termination of the fossa; sides of the head, in front of the eye, ornamented with a membranous caruncle, which is either entire or slightly bilobate; the portion above a line drawn from the eye to the base of the bill, and which forms a lobe, when a division exists, is broader than the remaining portion, and its upper extremity is obtusely pointed; the portion below the line is more than twice the length of the upper, considerably narrower, obtuse at the point, and somewhat of a falciform shape. Wings, when folded, reach to the tip of the tail, or even slightly beyond it; the second and third quill feathers are of equal length and the longest, the first

VANELLUS LATERALIS.

and fourth are a little shorter. Tail slightly rounded; legs very long and slender, the lower half of the thigh bare; tarsus covered in front by transverse plates, behind by several rows of scales; toes rather short, the middle and outermost connected at the base by a rudimentary web, hinder toe extremely short; immediately below the bend of the wing a short curved and pointed spur.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	3	6
the tip of the tail	13	6	the outer toe	0	10½
of the bill from the angle of			the middle toe.....	1	1
the mouth	1	6	the hinder toe.....	0	2½
of the wings when folded ...	9	0	the carpal spur	0	5
of the tail	4	0			

In the *female* the back of the neck is scarcely if at all streaked with brown; in other respects the colors of both sexes are alike, only those of the female are not quite so bright.

This is the third African species of the genus *Vanellus*, with which I am acquainted, that has the head ornamented with membranous wattles, and the only one which has yet, I believe, been discovered south of the Equator; the other two, *Vanellus albigapillus*, Vieillot,* and *V. albiceps*, Gould,† are both of Northern Africa. Our species cannot be confounded with the latter, though it may possibly require a little attention to distinguish it from the former. By reference to the flanks and femoral coverts, we are at once furnished with the diagnostic characters; in Vieillot's species, those are like the other parts of the belly, white; in the South African species, they are of a very different hue, being a dark slate colour or even bluish black. Should such differences, however, not be regarded as sufficient to establish them as two species, numerous other peculiarities are to be readily detected on a careful examination of the two birds.

Vanellus lateralis, as far as I know, has never been found to approach the southern extremity of Africa; it would appear to be an inhabitant of the south-east coast, and not to extend its range west of Port Natal. When about to cross the U'Tugale river, some fifty miles eastward of Port Natal, I observed two specimens feeding near to the edge of the water, both of which were procured after great exertions. They manifested extreme watchfulness, always kept upon the bare sand, and cautiously avoided approaching spots where thickets or any kind of cover existed from which they might be shot. During their movements to and fro, they carried their bodies erect and never indulged in any of those jerking motions, which we observed constantly practised by all the species of *Pluvianus*. They were discovered to have been feeding upon water insects, small *mollusca*, &c.

* Vieillot, Gal. des Oiseaux, Plate 236.

† Proceedings of the Zoological Society for 1836, p. 45.



PYRRHULAUDA AUSTRALIS, A. Male B. Female.
Aves. Austr. 61.

PYRRHULAUDA AUSTRALIS.—SMITH.

AVES.—PLATE XXIV. (MALE AND FEMALE.)

Mas.—P. capite nigro-brunneo; gulâ, gutture, corporisque partibus inferioribus nigris; interscapularibus, dorsoque subferrugineis brunneo-strigatis; alarum tectricibus minoribus, tectricibusque primariis et secundariis sordidè fuscis, primariis exceptis, rufo-marginatis; rectricibus duobus intermediis fuscis rufo-marginatis, cæteribus nigris. Rostro albo; oculis brunneis; pedibus subcarneis.

Fem.—Suprà rufa fusco-strigata; subtus rufo-alba, pectore fusco-maculato.

LONGITUDO 5 unc.

MEGALOTIS AUSTRALIS, Rep. of Exped. App. page 49, June, 1836.

COLOUR. *Male.*—Head and under parts black, the upper and lateral parts of the former with a strong rusty tint; interscapulars and back subferrugineous, tinted with grey and variegated with brown streaks, one streak along the middle of each feather; upper tail coverts dark umber-brown faintly tipped with pale rufous. The lesser wing coverts, the primary and secondary quill coverts, and the tertiary quill feathers umber-brown, and, with the exception of the primary coverts, distinctly edged and tipped with rufous; the primary and secondary quill feathers dark umber-brown verging to black. Tail, with the exception of the two middle feathers, black, these are umber-brown, edged and tipped with rufous. Bill white, with a livid shade. Eyes dark-brown; legs and toes flesh-coloured.

FORM, &c.—Figure and carriage, in some respects, like those of the Larks (*Alaudinæ*), in others, like those of the Finches (*Fringilinæ*), the points of resemblance, as far as number are concerned, being in favour of the latter. Body rather robust; head broad and flat above; bill conical and pointed, the culmen obtuse and slightly curving from the base, the sides of the upper mandible convex particularly towards the base, the commissure straight, and the cutting edges of the under mandible received within those of the upper; nostrils basilar and concealed by a covering of rigid wiry feathers. Wings rather long and rounded, when folded they reach over the first two-thirds of the tail, the first quill rudimentary, the third and fourth the longest and slightly exceeding the second and fifth, the sixth considerably shorter; several of the shorter primaries have their points emarginate; the tertiaries nearly as long as the primaries. Tail of moderate length and slightly forked. Tarsus short, moderately robust, and shielded both before and behind; toes short and rather slender, the outermost and innermost of equal length, the

PYRRHULAUDA AUSTRALIS.

middle one longer than either by the last joint ; hinder toe shorter than the shortest of the anterior ones, the claws nearly straight, that of the hinder toe longer and stronger than any of the others.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	7½
the tip of the tail	5	0	the outer toe	0	2¾
of the bill	0	5	the middle toe	0	3½
of the wings when folded.....	3	2	the hinder toe.....	0	2¼
of the tail	2	2	the hinder toe and claw...	0	4½

Female.—Above dull rufous streaked with umber-brown, particularly on the head and neck ; beneath rusty white, the breast mottled with umber-brown stripes ; eye-brows white ; ear coverts brown ; the outer vanes of the two lateral tail feathers, together with a portion of the inner vane of the outermost adjoining the shaft, and the tips of both cream-yellow. The *young* bird exhibits nearly the same colours as the *female*, only most of the feathers of the upper parts are margined with dull rusty white, and the brown stripes on the breast are less defined.

In the year 1829, when I proposed to institute a new ornithological group under the title of *Pyrrhulauda*, I was only acquainted with one bird (the present), which I regarded as possessing typical characters. Since that period I have had opportunities of studying three other species, —two of South Africa and one of India,—all of which go to confirm the propriety of the division proposed. The figure of these birds and a few of their habits assimilate them to the *Fringillinæ*, while the majority of their habits, together with several points in the structure of individual parts, and the disposition of some of their colours, indicate their closer approximation to *Alaudinæ*. Temminck, by looking to their form, has classed them as Finches, while on the other hand Lafresnaye,* by regarding the structure, &c. of individual parts, has maintained their place to be with the Larks, in which view he is supported by Lichtenstein, who esteems them as Larks, and closely allied to *Callendulle*, *Mirafra* and *L'Alouette ba'eleuse* of Levaillant.

If it be a law of nature that every principal group shall consist of a series of subordinate ones, each of which shall have its representative in some other principal groups, then we may view *Pyrrhulauda* as the group of *Fringillinæ*, representing one of those of *Alaudinæ* ; but on the contrary, if such be not a law, then we must concur with the last-named authors in placing *Pyrrhulauda* as a group of *Alaudinæ*.

The present species is gregarious, and flocks of several hundred individuals are often seen upon the plains bordering the Orange River. It rises into the air, and after soaring for a time, descends again like the larks, and like them also it builds its nest upon the ground, under the shelter of a tuft of grass or some dwarf shrub. For more of its habits, see remarks to the other species.

* Magazin de Zoologie, par Guerin, 1833.

The first part of the paper is devoted to the study of the properties of the function $f(x)$ defined by the equation

$$\begin{aligned}
 f(x) &= \int_0^x \frac{1}{1+t^2} dt \\
 &= \arctan x
 \end{aligned}$$

In the second part we shall consider the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and we shall show that it is a solution of the differential equation

$$f'(x) = \frac{1}{1+x^2}$$

In the third part we shall consider the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and we shall show that it is a solution of the differential equation

$$f'(x) = \frac{1}{1+x^2}$$

In the fourth part we shall consider the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and we shall show that it is a solution of the differential equation

$$f'(x) = \frac{1}{1+x^2}$$



PYRRHULAUDA VERTICALIS.—SMITH.

AVES.—PLATE XXV. (MALE, FEMALE, AND YOUNG.)

Mas.—P. capite, corporisque partibus inferioribus brunneo-nigris; vertice, genis, fasciâ transversâ pone nucham, maculâ ad latus pectoris, corporisque lateribus albis; dorso sordidè fusco, plumis griseo-albis marginatis; alarum tectricibus minoribus, remigiumque tectricibus brunneis, albo-marginatis; remigibus rubro-brunneis, apicibus sub-albis; caudâ, rectrice externâ exceptâ, brunneo-nigrâ, hâc præcipuè, sub-albâ; oculis brunneis; pedibus carneis.

Fem.—Supra brunnea plumis pallidè rufo-brunneo-marginatis; gulâ guttureque subalbidis; pectore rufo-albo, brunneo-maculato; abdomine nigro; corporis lateribus, crissoque sordidè albis.

LONGITUDO $5\frac{1}{2}$ unc.

MEGALOTIS VERTICALIS, Rep. of Exped. App. page 48, 1836.

COLOUR. *Male.*—The crown of the head, the cheeks, a transverse bar on the back of the neck, and an irregular blotch on each side of the breast, together with the flanks, white; the remainder of the head and under parts rusty black. The interscapulars, back, rump, and upper tail coverts dirty umber-brown, each feather irregularly edged with greyish white; the lesser wing coverts and the primary and secondary quill coverts umber-brown, broadly edged with white; the quill feathers broccoli-brown faintly tipped with white, and the secondaries and tertiaries, besides, are margined externally with the same colour; inner aspect of shoulders umber-brown. Tail, with the exception of the outermost feather of each side, umber-brown, the four middle feathers darkest: the two feathers excepted are rusty white, with a cloud of brown along the inner vane towards its inner margin, and each presents also a dash of the same tint upon the outer vane towards its quill. Bill dusky white, with a livid shade; eyes dark-brown; legs and toes flesh-coloured; claws horn-coloured.

FORM, &c.—Typical. Head rather small. Bill considerably thicker than that of *P. Australis*, its sides more convex, and the culmen more obtuse and more arched; commissure slightly waved. Wings rounded, and when folded, reach to the last third of the tail, the first quill feather rudimentary, the third and fourth of equal length and longest, the fifth rather shorter, the second and sixth equal and considerably shorter than the fifth. Tail very slightly forked. Tarsus and toes moderately robust, the outermost and

PYRRHULAUDA VERTICALIS.

innermost toes rather longer than the hinder one, but shorter than the middle one ; claws nearly straight, that of the hinder toe longest.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	0	7½
the tip of the tail	5	6	the middle toe.....	0	4½
of the bill	0	5½	the outer toe	0	3½
of the wings when folded	3	2	the hinder toe	0	3
of the tail	2	3	the hinder claw.....	0	3

Female.—Above dusky brown, all the feathers more or less broadly margined with a colour somewhat intermediate between ochre-yellow and wood-brown ; quill feathers intermediate between broccoli and wood-brown ; the tertiaries and a few of the innermost secondaries margined externally and tipped with pale sienna-yellow. The outermost tail feather of each side pale cream-yellow, with a dash of brown near the inner edge of the inner vane ; the second feather margined externally with pale cream-yellow, the two middle feathers approaching to wood-brown, their edges and tips lightest, the remaining feathers of a uniform umber-brown. Eye-brows rusty white ; chin and throat dull white ; breast rusty white with brown spots ; middle of the belly brownish black ; sides of the belly and flanks dirty white, here and there clouded with dusky tints.

The colours of the *young* bird are nearly similar to those of the *female*, only the edgings of the feathers, particularly those of the head and shoulders, are more defined and contrast stronger with the general colour than they do in the female.

This species, like *Pyrrhulanda australis*, inhabits the extensive arid plains of the more southern districts of South Africa, and like it, congregates in large flocks. When feeding, the numerous members of these flocks are widely scattered ; but the moment one individual takes to flight from alarm, all the others follow the example, and they move off in a body to another locality. It is not their custom to fly far before they come to a halt, and the instant they reach the ground they scatter in all directions, and run to and fro with great rapidity. When flying they pursue a slightly undulating course, and on these occasions they frequently utter cries similar to what they do when running upon the ground, and which consist of a shrill prolonged chirp, nearly like to the sound which may be produced by shutting the teeth and drawing in the breath while the lips are alternately pressed together and opened. Soaring appears to be less practised by this species than the last ; yet, nevertheless, individuals are occasionally to be seen rising in the air and descending again almost perpendicularly. Like *P. australis*, it feeds upon the seeds of grasses, &c.

PYRRHULAUDA LEUCOTIS.

AVES.—PLATE XXVI. (MALE, FEMALE, AND YOUNG.)

Mas.—P. capite, cervice, humeris, abdomine, crissoque nigris; genis, fasciâ transversâ pone nucham, maculâ ad latus pectoris, laterum partibus posterioribus, uropygio, caudæque tectricibus superioris albis; dorso, alarumque tectricibus minoribus, et secundariis castaneis; remigibus brunneis; caudâ, rectrice externâ exceptâ, brunneâ, quatuor rectricibus intermediis, apicibus marginibusque subrufis, externâ rufo-albâ brunneo-umbratâ. Rostro albo, brunneo-umbrato; oculis brunneis; pedibus carneis.

Fem.—Suprà brunnea, plumis pallidè rufo marginatis; humeris pallidè castaneis albo marginatis; gulâ, gutture, pectoreque sordidè albis, brunneo-punctatis; abdomine nigro; corporis lateribus, crissoque sordidè albis, fusco-umbratis.

LONGITUDO 5 unc.

LOXIA LEUCOTIS, Salt, Abyss. App. page lix.

FRINGILLA OTOLEUCUS, Temm. Pl. Col. 358, fig. 2 & 3.

COLOUR. *Male.*—Head, neck, shoulders, breast and abdomen black; ear coverts, a transverse bar on the back of the neck, a blotch on each side of the breast, the hinder portion of the flanks, the rump and the upper tail coverts white, the two latter tinged with wood-brown; interscapulars, back, lesser wing coverts and the secondary quill coverts intermediate between chesnut and tile-red, several of the coverts tipt and edged with white. Primary quill coverts and the quill feathers intermediate between broccoli and umber-brown, the tertiaries and a few of the innermost secondaries tipt and edged with pale rufous. Tail, with the exception of the outermost feather of each side, umber-brown, the four middle feathers the lightest, and tipt and edged with pale rufous, the outermost feather rusty white clouded with brown, particularly upon the inner vane. Bill white clouded with dusky; eyes dark-brown; legs and toes a flesh-colour shaded with brown.

FORM, &c.—Typical. Bill rather longer than that of *P. Australis*, more compressed towards the point and narrower at the base than in that of *P. Verticalis*; culmen towards the base but lightly curved, towards the tip much arched; head rather small; wings when folded reach to the last third of the tail; quill feathers nearly as described in *P. Australis*. Tail but very slightly forked. Tarsus robust; toes short and stout, the outermost and innermost of equal length, and scarcely longer than the hinder one, the middle toe

PYRRHULAUDA LEUCOTIS.

exceeds the others in length by its last joint; the claws are but slightly curved, the claw of the hinder toe longer than the toe itself.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	7 $\frac{1}{2}$
the tip of the tail	5	0	of the middle toe.....	0	4 $\frac{1}{2}$
of the bill.....	0	6	of the other toes	0	3 $\frac{1}{4}$
of the wings when folded ...	3	3	of the hinder claw	0	3
of the tail	2	0			

Female.—Above dusky brown, the feathers edged with pale rufous or rufous-white; the lesser wing coverts brown towards their bases and rufous towards their points, many of them partially margined with white; the primary and secondary quill coverts and the quill feathers brown, the two first tipt and margined externally with white or pale rufous, the quills excepting the two or three outermost are margined externally with rufous, and narrowly tipt with white. Chin, throat, breast, flanks, and vent rusty white, the chin, throat and breast faintly mottled with small brown spots; inner surface of the shoulder dark umber-brown; eye-brows dirty white spotted with rufous; and there are indications of a narrow white collar upon the back and sides of the neck. Tail dark-brown, the feathers margined and tipt with pale rufous, the outer vane of the outermost of each side pale rufous or rusty white.

The *young bird* is coloured nearly as the *female*, only the tints are more dusky and the light edgings to the feathers, particularly those of the head and shoulders, are narrower, but more distinct and better defined.

Of the manners and habits of this species we know but little. Though its members show a disposition for society, yet we never detected more than five or six individuals associated together, which circumstance has always inclined us to believe that we had not reached the head-quarters of the species. The few specimens we obtained were killed upon plains thinly covered with dwarf shrubs, near to the Tropic of Capricorn. Their flight, when occasioned by fear, was usually but short, and they were never seen to alight upon anything but the ground, along which they ran with great rapidity, and then proceeded to collect their food, which consisted of seeds, &c.



SPARROW, CAPTIVE, ALB. I. F. H.
(1875)

PLATYRHYNCHUS CAPENSIS.—SMITH.

AVES.—PLATE XXVII. (MALE AND FEMALE.)

Mas.—Pl. capite supra nigro ; cervice dorsoque flavo-brunneis, fusco-strigatis ; subtus sordidè albus, parcè fusco-strigatus ; capistro, spatiisque ante oculos pallidè flavis ; alarum tectricibus minoribus, remigium tectricibus, remigibusque griseo-brunneis, quibusdam subflavo-marginatis, lineas obliquas duos versus basin alarum formantibus ; rectricibus griseo-brunneis pallidè flavo-brunneo marginatis. Mandibulâ superiore olivaceo-brunneâ, inferiore subflavâ, ambobus argenteo-nitentibus ; pedibus, unguibusque viride-flavis.

Fem.—Capite sordidè griseo, fusco-strigato, aliter ut in mare.

LONGITUDO corporis cum capite 3 unc. 5 lin. ; caudæ 2 unc. 5 lin.

COLOUR.—Space between eye and bill straw-yellow ; upper part of head black, with a few of the feathers at the base of the bill narrowly edged with white. The back and sides of the neck, the interscapulars, the scapulars, the back, and the rump, intermediate between yellowish brown and oil-green, each feather with an oblong, umber-brown stripe along its centre—the feathers of the neck are dusky grey towards their bases, those of the back pure white. Chin, throat, breast and belly dirty white and variegated with narrow, longitudinal, greyish brown streaks ; the sides of the breast and the vent are faintly tinted here and there with ochre-yellow. Lesser wing-coverts, primary and secondary quill-coverts, quill feathers and tail dark greyish brown ; several of the lesser coverts and the secondary quill-coverts are broadly tipped with dull sienna-yellow, and in this way are formed two oblique stripes of that colour towards the anterior portion of each wing ;—each of the first-named feathers which is so tipped has also a longitudinal umber-brown stripe in the course of the shaft ;—the secondary wing coverts, together with the tertiary quill feathers and a few of the innermost of the secondary quill coverts are margined externally with pale yellowish brown, and as well as the remaining quill feathers internally with white, most distinctly towards their bases. Tail feathers faintly edged with light olive-brown, the colour most palpable upon the outer vanes. Upper mandible dark olive-brown, lower, pale straw yellow, and both are glossed with a silvery lustre. Feet and claws greenish yellow.

FORM.—Figure robust ; feathers lax and silky. Head large and broad ; bill much depressed, very wide at the base and narrow at the tip, the

PLATYRHYNCHUS CAPENSIS.

upper mandible strongly hooked, the lower emarginate and slightly bent upwards ; the sides of the upper mandible are convex, and the culmen, particularly towards the point of the bill, is distinct though blunt ; nostrils and base of bill concealed by strong bristles and rigid wiry feathers, the former at the angles of the mouth directed laterally. Wings rather short and rounded, and when folded reach nearly to the commencement of the last half of the tail. Third and fourth quill feathers longest and equal ; second, fifth and sixth slightly shorter, the first about half an inch shorter than the third. Tail slightly rounded at the point, the two middle feathers rather shorter than those immediately on each side of them. Tarsi short and rather slender, scutellated anteriorly, scaled posteriorly ; toes long and slender, the middle and innermost nearly of equal length and united as far as the third joint, the outermost considerably shorter and free except at its base, the hinder one nearly of the same length as the outermost ; claws large, pointed and much curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	0	7½
the tip of the tail	5	10	the outer toe	0	6½
of the bill from the angle of the			the middle toe.....	0	6
mouth	0	11	the inner toe.....	0	5½
of the wings when folded	2	11	the hinder toe	0	4
of the tail	2	11			

In the *female* the upper parts of the head are a dusky slate-grey, striped with umber-brown ; on the back the umber-brown stripes are narrower than in the male ; on the under parts they are the reverse. In other respects, the colours are nearly the same in both sexes.

I have not found this species beyond the forests which exist upon the south-east coast, towards Delagoa Bay. It frequents chiefly the brushwood which occurs scattered among the large trees, though occasionally it also resorts to the trees themselves in search of insects, which constitute its food. While hunger presses, it moves incessantly to and fro, and its progress from one spot to another is effected with great rapidity, yet so as to admit of its readily detecting the objects of which it is in quest, as is evident from the frequency with which it is to be seen seizing small *Lepidoptera* and other insects, even when on the wing. While at rest it is usually found perched in the depths of thickets, and commonly in damp sequestered situations.

Having never had an opportunity of examining recent specimens, I merely surmise the individuals in which the head is black to be males ; the reverse, however, may be the case.



SALICOLA INEQUATA.
AL. T. 18

SAXICOLA INFUSCATA.—SMITH.

AVES.—PLATE XXVIII. MALE.

S. supra griseo-brunnea ; gulâ guttureque sordidè albis ; pectore abdomineque flavo-griseis, plus minusve brunneo-tinctis ; alarum tectricibus, remigibus, rectricibusque fuscis, partim sordidè albo-marginatis. Rostro pedibusque nigro-brunneis.

LONGITUDO corporis cum capite 4 unc. ; caudæ $3\frac{1}{2}$ unc.

COLOUR.—The upper and lateral parts of the head, the back and sides of the neck, the interscapulars and the back rusty broccoli-brown ; the chin and the throat dirty white ; the breast, belly, and thighs, yellowish grey, more or less deeply tinted with brown. Lesser wing coverts, primary and secondary quill coverts, quill feathers and tail umber-brown, the coverts and the secondary quill feathers edged and tipped with dirty white, the primary quill feathers towards their bases and the lateral tail feathers, particularly the outermost one of each side, margined externally with the same colour. Bill, feet, and claws, liver-brown ; eyes dark brown.

FORM, &c.—Figure robust. Bill strong, rather broad at base and the cutting edges distinctly inflected, apex of upper mandible slightly hooked. Wings rounded, and when folded, reach to the commencement of the last half of the tail ; the first quill feather rudimentary, the third and fourth longest and equal, the fifth is slightly shorter than the fourth, and the second and sixth are of equal length, and about three lines shorter than the third. Tail square at the point. Tarsi long, and rather robust, anteriorly scutellated, posteriorly entire ; claws long, strong, and moderately curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	1	$3\frac{1}{2}$
the tip of the tail.....	7	6	of the outer toe.....	0	$5\frac{1}{2}$
Length of the bill from the gape.....	0	$10\frac{1}{2}$	of the middle toe.....	0	$7\frac{1}{2}$
of the wings when folded.....	4	9	of the inner toe.....	0	3
of the tail.....	3	6	of the hinder toe.....	0	$3\frac{1}{2}$

The colours of the *female* differ little if at all from those of the male.

This is the largest and rarest of the South African *Saxicolæ*. It appears to be principally, if not entirely restricted to the districts between the Oliphant and Orange Rivers, and seldom

SAXICOLA INFUSCATA.

occurs far from the sea-coast. It selects sterile tracts which are thinly covered with brush-wood for its *habitats*, and in these situations it is so extremely watchful that even weeks of incessant toil will scarcely ensure the collector a specimen. When disturbed it perches upon the highest twig within its reach, and from that incessantly surveys the country around, and if the slightest danger is suspected, it either flies off to a distance or dives among the shrubs, and conceals itself until the patience of the pursuer is exhausted. During many months which I passed in the country in which this species occurs, I only saw twelve individuals, and it was not till the nest of a pair was discovered, that two specimens were obtained. Anxiety for the welfare of their young appeared to diminish the solicitude they manifested under other circumstances for their own safety, and it was by taking advantage of that discovery that we obtained the male and female we now possess. It seeks its food, which consists of insects, upon the ground, and while on it, as well as when perched, it raises and depresses its half extended wings after the manner of the other species of the genus.

In addition to the present bird, we have eleven other species inhabiting the South of Africa. They are

Saxicola pileata, Vieill. *Le Traquet Imitateur*, Le Vaill. *Ois. d'Afrique*, pl. 181.

Saxicola familiaris. *Le Traquet Familier*, Le Vaill. *Ib.* pl. 183.

Saxicola sperata, Lin.

Saxicola rubicola. *Le Traquet Patre*, Le Vaill. *Ib.* pl. 180.

Saxicola formicivora, Vieill. *Le Traquet Fourmillier*, Le Vaill. *Ib.* pl. 186 and 7.

Saxicola leucoptera, Swainson.

Saxicola monticola, Vieill. *Le Traquet Montagnard*, Le Vaill. *Ib.* pl. 183.

Saxicola cinerea, Vieill. *Le Traquet Tractrac*, Le Vaill. *Ib.* pl. 184.

Saxicola Le Vaillantii, Smith.

Saxicola nigra, Vieill. *Le Traquet commandeur*, Le Vaill. *Ib.* pl. 190.

Saxicola cursoria, Vieill. *Le Traquet à calotte et queue blanche*, Le Vaill. *Ib.* pl. 190.

Saxicola bifasciata, Temm. Pl. col. 472, fig. 2.

Saxicola Baroica, Smith.

Eight of the above species have been well figured by Le Vaillant, and a representation of the last named will be given in the course of these illustrations.



ALAUDA FERRUGINEA
(Aves—Plate 29)

ALAUDA FERRUGINEA.—SMITH.*

AVES.—PLATE XXIX. (MALE.)

A. supra ferruginea, infra sordide alba; gulâ, gutture pectoreque nigro-brunneo strigatis; superciliis sub-ochreis; remigibus brunneis; rectricibus nigro-brunneis, quatuor externis, externè rufo-marginatis, duabus mediis ferrugineis; rostro brunneo, mandibulâ versus basin sub-flavâ; pedibus flavo-brunneis; oculis brunneis.

LONGITUDO corporis cum capite 4 unc. 3 lin.; caudæ 3 unc. 2 lin.

COLOUR.—The upper and lateral parts of the head, the back and sides of neck, the back, rump, shoulders, scapulars, two or three innermost tertiaries, and two centre tail-feathers, bright ferrugineous red; the under parts dull-white, the breast and belly faintly tinted with buff-orange, and the throat, breast, and flanks, variegated with oblong dark-brown spots—one spot towards the point of each feather. The white of the chin is faintly mottled with some dusky tints, and the commencement of the throat is margined on each side by a blackish line, which commences at the base of the lower mandible, and terminates below the points of the ear-coverts. Eye-brows dirty ochre-yellow. The lesser wing coverts, the primary and secondary quill coverts, the primary and secondary quill feathers, and a stripe along the middle of the two or three innermost of the tertiaries, light umber-brown; the lesser coverts are edged and tipped with ferrugineous passing into white, and the quill coverts, together with the secondary quills and the primaries towards their base, edged externally with rusty white. Tail, with the exception of the two feathers already mentioned, dark umber-brown; the outermost feather of each side broadly edged externally with rufous white, and the one next in succession narrowly with the same colour. Bill dark yellowish

* Such naturalists as find characters by which the thick-billed Larks may be separated from those in which the bill is less developed, would probably place this species with the former. We confess our inability to discover fixed characters by which the limits of the two groupes could be defined, and as we have examined many species which we could not with certainty refer to either, provided the division was to be adopted, we think it better to include both kinds under *Alauda*.

ALAUDA FERRUGINEA.

brown, passing towards the base of lower mandible into dusky yellow. Eyes dark-brown ; feet and claws light yellowish-brown.

FORM, &c.—Typical. Bill strong, conical, and pointed, culmen slightly curved, and the nostrils are concealed by wiry recumbent feathers. Wings long, slightly rounded, and when folded reach to the commencement of the second half of the tail ; the third, fourth, fifth, and sixth quill-feathers, nearly equal, and longest, the second rather shorter, and the first is not quite half the length of the second ; tertiaries nearly as long as the primaries. Tail square at the point, or but very slightly forked. Tarsi robust, and scutellated both before and behind ; toes strong and short, the claws of the hinder rather longer than those of the anterior toes, and but very slightly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the outer toe	0	4
the tip of the tail	7	5	of the middle toe	0	5 $\frac{1}{4}$
Length of the bill from the gape	0	10	of the inner toe.....	0	3
of the wings when folded ...	4	1	of the hinder toe	0	3
of the tail.....	3	2	of the hinder claw	0	3 $\frac{1}{4}$
of the tarsus	1	2 $\frac{1}{2}$			

In the female the ground colours are not quite so bright as in the male, and the brown streaks on the breast are less distinct.

The extensive arid plains immediately to the southward of the Orange River, commonly called the Bushman Flats, form the favourite *habitat* of this Lark. It is a wild bird, manifesting considerable suspicion at the appearance of man, and unless in the mornings, rarely permits him to approach so near as to enable him to shoot it. It soars very frequently, particularly in the early part of the day, and about sun-rise whistles delightfully ; being, while so occupied, generally perched upon the summit of the highest bush which exists in the locality.

Besides this species, fifteen others inhabit the south of Africa. Le Vaillant has figured seven of these, and two, more recently discovered, have lately been represented in Guerin's "*Magazine de Zoologie*." Those yet unfigured we shall publish in the course of these illustrations.



PLOCEUS SUBAUREUS.—SMITH

AVES.—PLATE XXX. (Fig. 1, MALE.)

P. fronte, vertice, capitis lateribus, guttureque vitellinis ; nuchâ, cervice, dorso, alarumque tectricibus minoribus viridi-flavis ; caudæ tectricibus, pectore, abdomineque luteis ; remigibus brunneo-rubris, versus basin flavo-marginatis ; rectricibus brunneo-flavis, flavo-marginatis. Rostro livido-brunneo ; oculis, pedibus, unguibusque carneis.

LONGITUDO corporis cum capite 4 unc. ; caudæ 2 unc. 9 lin.

PLOCEUS SUBAUREUS.—Smith. Proceedings of South African Institution, April, 1832.

COLOUR.—The front, crown, sides of the head, and the throat, bright saffron yellow ; nape, back and sides of the neck, interscapulars, back and lesser wing-coverts intermediate between sulphur and gamboge-yellow ; upper tail coverts, breast, belly, and under tail coverts a clear and deep lemon-yellow (light chrome-yellow) ; primary quill coverts intermediate between sulphur and king's yellow, their tips between oil and honey-yellow ; secondary quill coverts similar in colour to the tips of the primaries and all margined with king's yellow. Quill feathers light brownish red, the outer vanes narrowly edged with king's yellow, the inner vanes towards their base, broadly, with primrose-yellow, which is also the colour of the inner surface of the shoulders. Tail intermediate between sulphur and honey-yellow, the outer vanes narrowly edged with king's yellow, the inner vanes, broadly, with pale primrose-yellow. Bill liver-brown, the under mandible slightly mottled with reddish brown ; eyes red ; legs, toes and claws a deep flesh colour, the latter clouded with brown.

FORM, &c.—Typical. Bill very thick and rather short ; culmen strongly arched. Wings when folded reach over nearly the basal half of the tail, fourth and fifth quill feathers of the same length and longest, third and sixth slightly shorter, second rather shorter than the third, first narrow and about one-third

PLOCEUS SUBAUREUS.

the length of the second. Tail rather long, and its apex slightly rounded, legs and toes robust, the tarsi in front distinctly scutellated, behind entire; claws strong and slightly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	0	10
the tip of the tail.....	6	10	of the outer toe.....	0	5 $\frac{3}{4}$
of the bill from the angle of			of the middle toe.....	0	8 $\frac{1}{4}$
the mouth.....	0	8	of the inner toe.....	0	5 $\frac{1}{2}$
of the wings when folded...	3	5	of the hinder toe	0	5 $\frac{1}{2}$
of the tail.....	2	9			

The colours of the *female* are not quite so bright as those of the male.

The head-quarters of this species and of *Ploceus ocularius* must be looked for to the northward of the Tropic of Capricorn; at least the paucity of specimens to the southward of it would warrant such an inference. During a residence of fourteen years in South Africa, I only met with four specimens of the last named species and ten of the present, and even a part of these were contained in the numerous collection, which during that period were submitted to my inspection. The specimens of *P. subaureus*, which I myself procured, were all killed in the neighbourhood of Algoa Bay, and those which were contained in the collections alluded to were either got in the same locality or more to the eastward.

A closely allied bird is found on the western coast of North Africa, and will require to be considered as of the same species if the opinion of Temminck* be founded upon facts. That learned ornithologist, when speaking of the differences in size between what he calls *L'Aigle oceanique* (*Falco leucogaster*, Lath) and *Le Blagre*, Levaillant, observes that he has noticed as great differences in that respect in other species. "The birds of prey of Senegal and the whole coast of Guinea," he remarks, "are one-third smaller than the same species which inhabit the middle of Africa, while all the birds of the genera *Lanius*, *Merops*, *Premierops*, and the greater number of the *Gallinaceæ* of the eastern coasts of Africa are larger and their plumage of purer colours and more brilliant than the same species in the more sterile parts of the middle of the continent."

As our experience does not incline us to such opinions, we shall continue to regard the Sierra Leone bird (*Ploceus aureo-flavus*, *nobis*)† as distinct, until more detailed evidence be adduced to show that climate and food are productive of such modifications.

* Planches colores, Plate 49. Text.

† *Ploceus aureo-flavus*. Head, throat, and breast saffron-yellow; belly, vent, and under tail coverts light chrome-yellow; back of neck, interscapulars, back, shoulders, tertiary quill feathers, and tail, intermediate between sulphur and honey-yellow. Primary and secondary quill feathers yellowish brown, and margined externally with pure yellow. Bill horn-coloured. Legs and claws flesh-coloured. Length from point of bill to tip of tail 5 $\frac{1}{2}$ inches; wings when folded, 3 in. 2 lin.; tail, 2 in. Inhabits Western Africa.

PLOCEUS OCULARIUS.—SMITH.

AVES.—PLATE XXX.—Fig. 2. (MALE.)

P. fronte, vertice, pectoreque auro-flavis; dorso, uropygio, humerisque flavo-virentibus; abdomine caudæque tectricibus inferioribus subvitellinis; gulâ, gutture, fasciâque per oculos nigris; remigibus griseo-brunneis externe flavo-marginatis; rectricibus flavo-brunneis, flavo-marginatis. Rostro nigro; oculis flavo-rubris; pedibus livido-purpureis.

LONGITUDO corporis cum capite 3 unc. 11 lin.; caudæ 3 unc. 1 lin.

PLOCEUS OCULARIUS, Smith.—Proceedings of the South African Institution, Nov. 1828.

COLOUR.—Front, crown, cheeks, sides of neck and breast golden yellow; nape, back, rump, upper tail coverts and lesser wing coverts greenish yellow verging towards oil-green; belly and under tail coverts gamboge-yellow, the latter inclining to king's-yellow. Chin, throat, and a transverse stripe on each side of the head enclosing the eye, deep black. Bill black; eyes reddish yellow; legs and toes livid purple; claws horn-coloured.

FORM, &c.—Figure rather slender. Bill long, considerably curved, and not so robust as in the more typical species; nostrils circular and near to the capistrum. Wings rounded, and when folded extend but little beyond the base of the tail; the third and fourth quill feathers rather the longest, the second and fifth slightly shorter, the first about one-third of the length of the second. Tail rather long and slightly rounded. Tarsus strong; the hinder toe very robust, and its claw strong and much curved; anterior toes rather slender and the claws delicate; the outer toe slightly longer than the inner one.

• DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tail	3	1
the tip of the tail	7	0	of the tarsus	1	1
of the bill to the angle of the			of the middle toe.....	0	7½
mouth.....	0	9½	of the outer toe	0	4
of the wings when folded ...	3	3	of the hinder toe.....	0	4

The principal difference between the male and female consists in the latter having the chin and throat of the same colour as the upper surface of the

PLOCEUS OCULARIUS.

head, and not black, as in the male ; the colours generally are not so bright as in the male.

When I first examined the figure of *Ploceus brachypterus*, Swainson,* I was disposed to regard it as intended to represent the species here figured ; but upon obtaining a specimen of the bird itself, from Western Africa, I found it to differ from ours in so many points, that I could not view them as identical. The bill of the Senegal bird is shorter and much more robust than that of the Cape one, and it is also less curved ; the colour of the back of the former is also much greener, and the black of the throat and the sides of the head is more extended.

Specimens of *Ploceus ocularius* are found sparingly distributed over South Africa : more especially in the vicinity of the south-east coast. There does not appear among the members of this species any predisposition to congregate — at least, we have rarely found more than the male and his female associated together, and these have generally been discovered in retired situations, well supplied with trees. From a branch of some one of these they suspend their nest, which is constructed of delicate fibres of bark closely interwoven, and so fashioned as to give it when complete the form of a retort. The female generally lays three eggs, which are of a bluish-white colour, spotted sparingly with dusky brown,—the spots of greatest size and most numerous towards the large extremity. The male and female sit alternately upon the eggs, and while so occupied, they are so pertinacious of their duty, that they may with the greatest facility be taken alive in the nest.

* Naturalist's Library, by Sir William Jardine ; Ornithology, Vol. vii., Pl. 10.



PTEROCLES GUTTURALIS female
(Aves - Plate 51)

PTEROCLES GUTTURALIS.—SMITH.

AVES.—PLATE XXXI. (FEMALE.)

For the description of this bird see the letter-press accompanying Plate III.

The egg is represented of the natural size, and each female lays two or three once or oftener during the warm season. These they deposit, without any care, upon the bare ground, and it is only when level spots fitted to the reception of eggs cannot readily be obtained that the birds of this genus bestow any labour on the preparation of nestling places. Nothing is ever interposed between the eggs and the soil, indeed whatever is calculated to separate them is carefully avoided. Almost the instant the young birds escape from the shell they take to a wandering life, and remove from place to place with their parents in quest of food.

Though we find species of *Pterocles* beyond the confines of Africa, yet the majority of those now known are peculiar to it. The regions south of the equator have furnished nearly as many species as those to the north of it; and both will doubtless afford many additional ones when the yet unknown districts shall have been thoroughly explored. Each of the known species, as far as our observations go, has a limited range, and should the ranges of such as inhabit the unexplored tracts of the interior not be greater, we may in time expect great additions to the present list. The following are the African species with which we are at present acquainted.

Pterocles arenarius, *Temm.* Barbary and Senegal.

Pterocles guttatus, *Licht.* Egypt.

Pterocles quadricinctus, *Temm.* Senegal.

Pterocles coronatus, *Licht.* Nubia.

Pterocles Lichtensteinii, *Temm.* Nubia.

Pterocles tricinctus, *Swain.* Senegal.

Pterocles exustus, *Temm.* Egypt and Senegal.

Pterocles tachypetes, *Temm.* South Africa.

Pterocles bicinctus, *Temm.* South Africa.

Pterocles simplex, *Roux.* South Africa.

Pterocles maculosus, *Burchell,* South Africa.

Pterocles gutturalis, *Smith,* South Africa.



IBIS, *IBIS*
OF *IBIS*

PARRA CAPENSIS.—SMITH.

AVES.—PLATE XXXII.

P. fronte subflavâ ; superciliis albis ; capite suprâ, fasciâ ante alas, corporis lateribus, caudâque rubro-aurantiis ; cervice nigrâ, purpureo-tinctâ ; dorso flavo-brunneo ; subtus alba ; gutturi, pectorisque lateribus viridi-flavis ; remigibus purpureo-brunneis, apicibus aliquarum albis, reliquarum flavo-brunneis ; rostro unguibusque flavo-brunneis ; pedibus viridi-flavis.

LONGITUDO corporis cum capite $5\frac{1}{2}$ unc. ; caudæ 1 unc. 9 lin.

COLOUR.—Front sienna-yellow ; eyebrows white ; the crown of the head, the nape, the sides of the head, behind the eyes, a narrow bar on each side of base of neck, in front of the shoulders, together with the sides of the body, and the tail, deep reddish orange, brightest on the head. The upper surface of the neck, between the nape and the interscapulars, black glossed with purple ; interscapulars, back, and upper tail coverts, intermediate between broccoli and yellowish brown, the feathers tipt with wood-brown, and clouded with metallic purple. Sides of neck and breast pale greenish-yellow ; chin, throat, breast, belly, and under tail coverts, white ; shoulders and lesser wing coverts yellowish grey ; primary quill coverts light liver-brown ; secondary quill coverts pale broccoli-brown, tipt and edged externally with white. Primary and secondary quill feathers liver-brown, a few of the innermost secondaries white at the points, the remainder together with the primaries narrowly tipt with yellowish brown ; tertiaries between brownish red and yellowish brown, their tips and the edges of the outer vanes dull white. Inner surface of shoulders and wings light liver-brown. Bill and claws yellowish brown ; legs and toes livid greenish yellow.

FORM, &c.—Aberrant. Bill straight, moderately long, slender, and towards the point distinctly wedge-shaped. Wings, when folded, reach to near the tip of the tail, the first and second quill feathers longest, the third, fourth, and fifth nearly equal, and slightly shorter than the two outermost. On the edge of each shoulder a small tubercle in place of a spine. Tail lax and conical.

PARRA CAPENSIS.

Legs strong and rather short; tarsi scutellated anteriorly, the *scutæ* most distinct towards the toes; lower half of tibiæ naked; claws long, straight and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the outer toe.....	1	4
the tip of the tail.....	7	3	of the middle toe.....	1	4
Length of the bill from the gape.....	0	9½	of the inner toe	1	3
of the wings when folded.....	3	9	of the hinder toe.....	0	6
of the tail.....	1	10	of the hinder claw.....	0	9
of the tarsus.	1	5	of the other claws, about.....	0	6

We have only met with one individual of this species, and that we strongly suspect to be in immature plumage: the whole of the interscapulars, back and upper tail coverts are probably brilliant metallic purple in adult birds. It was killed, while seeking for its food, upon some water-plants which coated the surface of a small river near to Algoa Bay.

Parra Africana is the only other species of the group which has yet been found in Southern Africa: it never ranges so far to the westward as the Cape Colony, though it is often found to the Westward of Port Natal.



ACCIPITER VULPES
Aves. Plate 10

ATHENE CAPENSIS.—SMITH.

AVES.—PLATE XXXIII.—FEMALE.

A. *suprà* brunnea, posticè lucens; capite cerviceque *suprà* lineolis, maculisque sagittiformibus albis notatis; dorso flavo-brunneo lineolato; scapularibus internis maculis albis notatis, lineam longitudinalem formantibus; pectore, flavo-brunneo, brunneo-rubro, alboque, fasciato; abdomine albo, brunneo-maculato; remigibus reatricibusque brunneis, flavo-brunneo tæniolatis; rostro viridi-flavo; oculis aurantiis.

LONGITUDO $9\frac{1}{2}$ unc.

NOCTUA CAPENSIS, Smith.—South African Quarterly Journal, 2nd Series, 1834.

COLOUR.—The top of the head, and the back and the sides of the neck intermediate between chesnut-brown and cochineal-red, each feather variegated with two imperfect white bars, the one nearest the point somewhat arrow-shaped, and margined anteriorly and posteriorly with brown of a darker tint than that of the other parts of the feathers. Interscapulars, scapulars, back, rump, upper tail coverts, and tail feathers umber-brown, with a faint purple gloss; several of the scapulars are marked with large white blotches towards their points, and some of the outermost ones, which overlap the inner edges of the wings, are white with brown points; the remainder of the scapulars and the feathers of the other parts enumerated are crossed each by two light, yellowish-brown bars; the one nearest the point, in most situations, slightly arrow-shaped, or at least with more or less of an angle where it crosses the shaft; each of the tail feathers with fourteen narrow, and slightly waved, yellowish-brown bars. Shoulders, lesser wing coverts, and secondary quill coverts, the same colour as the back, and similarly barred, a few of the lesser coverts situated towards the outer edges of the wings, have each a large white blotch on the outer vane, which blotches form a sort of broken white bar along the anterior part of the wing, and parallel with that formed by the white scapulars. The large quill coverts, and the quill feathers pale umber brown, the latter, except the outer vanes of the two outermost primaries, crossed by many narrow, yellowish-brown bars, the bars of the inner vanes fading into white towards the edges of the feathers. The outer vanes of the two outermost primaries faintly margined towards the

ATHENE CAPENSIS.

quill with dusky white, and those of the remaining quill-feathers variegated with a few narrow white stripes upon their outer edges; inner surface of shoulders pale cream-yellow, their outer edges white. Chin and under surface of neck pale brownish-red, here and there indistinctly barred with pale cream-yellow; breast barred pale yellowish-brown, brownish red and white, the bars of the latter colour most distinct towards the base of the neck, where one occurs towards the point of each feather. Belly white with large brown blotches, one blotch near the tip of each feather; vent, and under tail coverts pale cream-yellow, legs white, externally tinted with light yellowish brown, and faintly barred with dull brown; bristles of toes yellowish white. Cere livid green; bill greenish-yellow; eyes orange-yellow; claws towards base yellowish-brown, towards points liver-brown.

FORM.—Typical. Bill small, the upper mandible much curved and strongly hooked at the point; cere covered with rigid wiry feathers and strong bristles. Wings rounded, and when folded reach rather beyond the first third of the tail, the fourth quill feather the longest, the third and fifth nearly equal, and rather shorter, the second considerably shorter, and the first about an inch and three quarters shorter than the longest. Tail slightly rounded at the point. Tarsi feathered to the toes, the latter thinly covered with strong rigid bristles; claws long, slender, and slightly curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	0	9
the tip of the tail..... ..	9	6	of the middle toe.....	0	9
of the bill from the gape	0	11½	of the outer toe	0	6½
of the tail	3	9	of the inner toe	0	7½
of the wings when folded ...	5	0	of the hinder toe	0	3

The bird of which the foregoing is a description was shot in the depths of one of the forests of the eastern district of the Cape Colony. It is the second specimen of the species we have seen; the first was also killed in a forest of the same district, in 1824, and differed in none of its essential characteristics from the one here described.



DICRURUS LUDWIGII
(Aves Plate 34)

DICRURUS LUDWIGII.—SMITH.

AVES.—PLATE XXXIV.—MALE.

D. niger, nitente cœruleo-viridi variegatus; abdomine, corporis lateribus, caudæ tectricibus inferioribus, femoribusque grisco-nigris. Remigibus primariis, secundariisque nigro-brunneis, externè nitente-cœruleo marginatis; rectricibus viridi-nigris. Rostro pedibusque rubro-brunneis. Oculis brunneis.

LONGITUDO 7 unc. 2 lin.

DICRURUS LUDWIGII, Smith. Proceedings of South African Institution, 1834.

COLOUR.—Black, with a gloss of blueish-green, the latter brightest on the head, back of the neck, interscapulars, shoulders, quill-coverts, tertiary quill-feathers and breast, and on these it varies in intensity according to the light in which the bird is examined; belly, flanks, under tail coverts, and thighs, greyish-black. Primary and secondary quill-feathers blackish-brown, the outer vanes narrowly edged with steel-blue. Tail deep greenish-black, with a faint metallic lustre, which is more distinct in some lights than in others. Bill, legs, and claws, reddish-black. Eyes deep brown.

FORM, &c.—Typical. Figure moderately robust. Bill short and stout, broad towards the base, compressed towards the point, the upper mandible hooked, and the lateral tooth well developed. Wings rather long, and, when folded, reach to the commencement of the last third of the tail; the third and fourth quill feathers equal and longest, the second and fifth slightly shorter, and the first about half the length of the longest ones. Tail slightly forked, the points of the feathers, especially the lateral ones, slightly divaricated. Tarsi anteriorly faintly scutellated, posteriorly entire. Toes slender, the hinder one strongest, the outer and middle ones united as far as the first joint; claws rather slender and moderately curved. Bristles at angle of mouth strong and rigid.

DICRURUS LUDWIGII.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.	0	7½
the tip of the tail	7	2	of the middle toe.....	0	5½
Length of the bill from the gape.....	0	10½	of the outer toe.....	0	4
of the tail	3	6	of the inner toe	0	3¼
of the wings when folded.....	4	0	of the hinder toe.....	0	3¼

Nothing is known of the *female*.

A few specimens of this bird were seen in 1832 in the forests adjoining Port Natal, but only one was procured. They were very shy, and the least ground of alarm caused them either to fly from their usual haunts or to retire into the dense foliage whither we could not follow them. The most retired situations appeared to form their favourite *habitats*, and in those they were either seen perched upon some dead tree, or else performing rapid evolutions in the air in search of food. They appeared from their perches to watch the approach of the insects upon which they fed, and the instant they perceived them they were upon the wing, and actively engaged in pursuing them. In the course of these movements they performed considerable circuits over the adjoining thickets, but generally at last returned to the spots from whence they set out, and there waited the appearances which courted further exertions. On one occasion two individuals were observed in the same locality; in the others only one.

This, and *Le Drongear*, Le Vaillant, Ois d'Afrique, pl. 167, (*Dicrurus musicus*, Vieill.) are the only species of the genus which I have been able to find in South Africa, though the author just mentioned assigns two others to that country, viz. *Le Drongo*, pl. 166, (*Dicrurus cristatus*, Vieill.) and *Le Drongo à moustaches*, pl. 169, (*Dicrurus mystaceus*, Vieill.) Considering the general accuracy of Le Vaillant, one feels disinclined to question his correctness on the present occasion, yet at the same time I must give it as my opinion that the last named, if they were killed in the localities our traveller mentions, are now no longer to be found in them, or else that they are only occasionally there as immigrants from some other country.

THEORY OF THE EARTH

BY J. H. VAN DER KAM

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59. The hydrosphere	59
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67. The biosphere	67
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69. The lithosphere	69
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96. The atmosphere	96
97. The biosphere	97
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99. The lithosphere	99
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CORYTHAIX PORPHYREOLOPHA.—VIGORS.

AVES.—PLATE XXXV.—MALE.

C. fronte, strigâque per oculos splendide viridibus ; capite cristato ; remigibus secundariis, rectricibusque splendenti purpureis ; collo, abdomine medio, pectore, regioneque interscapulari gramineo-viridibus, his subrufescentibus ; dorso abdomine imo, femoribusque griseo-nigris, primo viridi-tincto ; remigibus primariis, fasciâ latâ subpurpurascenti-coccineis ; rostro pedibusque subatris.

LONGITUDO corporis cum capite $7\frac{1}{2}$ unc. ; caudæ 8 unc.

CORYTHAIX PORPHYREOLOPHA.—Vigors. Proceedings of Zoological Society, page 93, June 1831.

CORYTHAIX BURCHELLII.—Smith. South African Quarterly Journal, No. 5, page 13, Oct. 1831.

COLOUR.—Front and sides of head brilliant dark green (duck green,) top of head, rudimentary crest, tertiary quill feathers, upper tail coverts and tail splendid purple, changing in some lights to brilliant deep green, with a strong metallic lustre. Neck, upper part of belly, shoulders, interscapulars and breast intermediate between sap and oil green, the two last named parts distinctly tinged with rusty orange ; back greyish black, strongly glossed with green ; hinder part of belly, flanks and thighs rusty blackish grey, faintly shaded with green. Lesser wing coverts, and secondary quill coverts bright lavender-purple, in certain lights changing to shining blue or purple ; primary quill coverts, brownish red ; bastard wings deep purplish green. Primary and secondary quill-feathers, bright crimson red, broadly tipped with a light purplish brown and narrowly edged with dark metallic green ; the termination of the crimson is separated from the purplish brown by a light yellowish brown line. The extent of the crimson is less upon the outer than upon the inner vanes, and is entirely wanting upon the outer vane of the first feather ; the bases of several of the innermost secondaries deep purplish brown ; the shafts of the quill-feathers clear reddish brown ; insides of shoulders dusky blackish brown, edged externally with greenish grey. Bill, legs, and claws, deep reddish black.

FORM, &c.—Bill naked and short, broad at the base, and compressed towards the point ; nostrils oval, nearly midway between the base and apex of the upper mandible and nearer to the culmen than the commissure, the latter slightly undulated. Head with a flattened and rudimentary crest of rigid feathers, which projects but little beyond the nape. Wings large, rounded,

CORYTHAIX PORPHYREOLOPHA.

and when folded reach to the commencement of the second third of the tail; the fifth quill feather rather the longest, the fourth, third, second and first successively shorter, the second being about the same length as the secondary quill feathers, the first nine lines shorter; the tertiaries as long as the primaries. Tail long and rounded at the point. Tarsi short, anteriorly scutellated, and posteriorly coated with minute granular scales; outer toe semiversatile; claws strong, pointed, and much curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to the			Length of the tarsus	1	9
tip of the tail	15	6	of the outer toe	0	11
Length of the bill from the gape.....	0	11	of the middle toe	1	6
of the wings when folded ...	7	3	of the inner toe	0	10
of the tail	8	0	of the hinder toe	0	6½

In the female the crest is shorter and the colours are less brilliant, the extent of the crimson upon the wings is also less and on few of the quills does it reach beyond the basal half of the feathers. Both sexes are nearly alike in size.

This species, as far as I know, has only yet been found towards Port Natal. It inhabits the scattered thickets which occur along the coast, and in the densest portions of these it seeks its food, which consists of fruits, &c. It is a very shy bird, and unless the spot upon which it perches after it has been disturbed be well marked, it will rarely be discovered by the hunter. When conscious of danger, it remains perfectly motionless, and as its usual position is parallel to the branch upon which it rests, little appears to facilitate the discovery. In moving from one part of a branch to another, it generally runs along it, either ascending or descending, according to circumstances, and it often pursues a similar course while removing from one side of a tree to the other.

Besides the present species, *Corythaix Persa* also inhabits southern Africa. The latter is still common within the limits of the colony, and there is scarcely a forest or wooded ravine from which the quick-sighted collector may not obtain specimens. It sits and moves to and fro upon trees in the manner of *C. porphyreolopha*.



SPRING SPARROW
SPRING SPARROW

TURDUS OBSCURUS.—SMITH.

—

AVES.—PLATE XXXVI.—MALE.

T. capite, dorso, gulâ, gutture, pectore, abdominisque lateribus griseo-brunneis; abdomine medio humerisque internè rubro-aurantiis; caudæ tectricibus inferioribus griseo-brunneis, singulis lineâ longitudinali albâ variegatis; alarum tectricibus minoribus, remigium tectricibus, remigibus, rectricibusque brunneis; rostro pedibusque flavis; oculis brunneis.

LONGITUDO corporis cum capite, 5 unc; caudæ, $4\frac{1}{2}$ unc.

MERULA OBSCURA, Smith.—App. to Rep. of Exped. p. 45, June, 1836.

COLOUR.—The upper parts of the head, neck and body, together with the chin, throat, breast, and sides of belly, intermediate between broccoli and clove-brown (greyish brown),—the colour of the four last named regions lightest. Lesser wing coverts, primary and secondary quill coverts, quill-feathers, and tail umber-brown, glossed with broccoli-brown, the tail darkest. Belly reddish orange, deadened with a tint of greyish-brown; inner surface of wings towards shoulders bright reddish orange; under tail-coverts greyish-brown, each feather with a dirty whitish stripe in the course of the shaft, and several of them are tipped with the same colour. Bill, legs and claws, yellow. Eyes dark brown.

FORM, &c.—Typical. Bill rather slender, and strongly compressed, the upper mandible considerably longer than the lower, and flattened towards the point; angles of mouth sparingly furnished with short bristles. Wings moderately long, and when folded reach to the commencement of the last half of the tail; the fourth and fifth quill feathers equal and longest, the third and sixth slightly shorter, the second about half an inch shorter than the third, the first rudimentary, and scarcely more than an inch in length. Tail slightly rounded at the point. Tarsi and toes robust, the former with

TURDUS OBSCURUS.

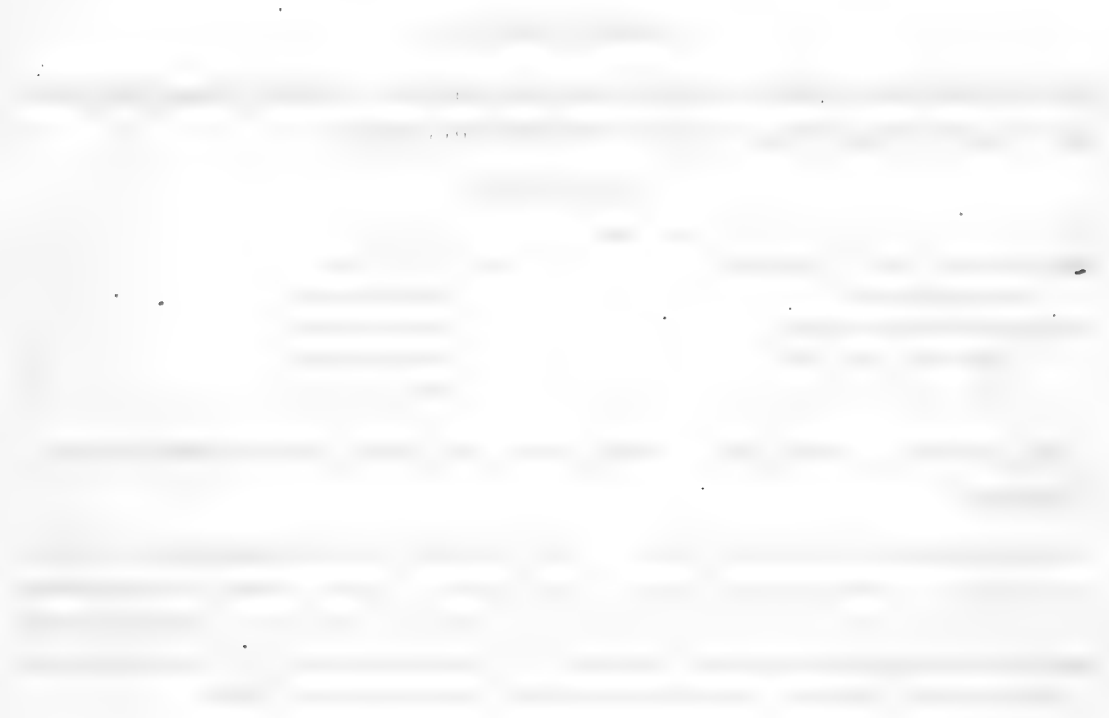
slight indications of scutæ in front, towards the toes ; claws strong and much curved, particularly those of the middle and hinder toes.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	1	3
the tip of the tail	9	6	of the outer toe	0	8
Length of the bill from the gape	1	0½	of the middle toe	0	10½
of the wings when folded ...	5	2	of the inner toe.....	0	6¾
of the tail.....	4	6	of the hinder toe	0	4½

The colours are the same in both sexes, only those of the *female* are of a duller tint.

The metropolis of this species is probably on the east coast towards Delagoa Bay, at least the few specimens we obtained were found in that direction. It is a solitary bird, inhabiting damp secluded thickets and brushwood skirting the banks of rivers, and is generally seen in such localities actively employed in displacing the decayed vegetation which occurs upon the surface of the soil, and which covers the insects and worms upon which it feeds.





TWO-BELLIED TREE TOAD
(*Hyla eximia*)

TURDUS STREPITANS.—SMITH.

AVES.—PLATE XXXVII.—MALE.

T. sordidè griseus; fronte verticeque fortiter, nuchâ, cervice, interscapularibus, scapularibus, humerisque leviter brunneo-tinctis; subtus albus, hic illic, ochreo-tinctus; cervicis lateribus, pectore, abdomineque maculis pyriformibus notatis; capitis lateribus albis ochreo-tinctis et fasciis tribus variatis infernè conjunctis. Oculis rubro-brunneis. Mandibulâ superiore, inferioris apice, unguibusque livido-brunneis; mandibulâ inferiore, pedibusque flavis. Caudâ breve leviter bifurcatâ.

LONGITUDO $8\frac{1}{2}$ unc.

MERULA LETSITSIRUPA, Smith, Rep. of Exped. App. p. 46. June, 1836.

COLOUR.—Front and top of head brownish grey; occiput, upper aspect of neck, interscapulars, scapulars and shoulders deep yellowish grey, faintly shaded with brown; back, rump, and upper tail coverts dirty ash-grey. Under parts white, tinted in places with ochre-yellow, and the sides of the neck, the whole of the breast, the flanks and the belly are variegated with blackish brown pyriform spots, one on each feather, the large end reaching nearly to its point. Sides of the head white, slightly tinted with ochre-yellow, and each is variegated below the eyes with three blackish brown bands; the anteriormost proceeds from the base of the lower mandible, the second from the middle of the under eyelid, and the third from the outer angle of the eye, the first extends nearly horizontally, and the two others obliquely downwards and backwards till they unite with the horizontal one. Primary wing coverts and primary quill feathers deep brownish red, the latter tipped and edged externally with yellowish white; the first two-thirds at least of the inner vanes of these feathers are of a clear buff-colour, darkest towards the shafts; the secondary wing coverts, and the secondary and tertiary quill feathers dark greyish brown, the outer vanes lightest, all margined externally and tipped with dirty white. Eyes reddish brown; upper mandible and tip of lower inferiorly as well as the claws liver-brown; lower mandible elsewhere and the cutting edge of upper pale saffron-yellow. Feet and insides of bill deep straw-yellow.

FORM, &c.—Figure robust and rather short. Bill long, and moderately strong; the upper mandible broad and slightly depressed towards the base,

TURDUS STREPITANS.

narrow and distinctly notched near the tip ; culmen between nostrils elevated and rounded, towards the point of bill strongly curved ; nasal *fossæ* large and membranous, the nostrils narrow longitudinal slits near to the edges of mandible ; wings short and rounded, and when folded they reach over the first half of the tail ; the first quill feather rudimentary, the third rather the longest, the second and fourth of equal length and scarcely shorter than the third, the fifth a little shorter than the fourth, and the remaining primaries diminish in length successively. Tail short and slightly forked. Legs long ; tarsi robust, anteriorly indistinctly scutellated, posteriorly entire ; toes strong, the inner and outer toes of the same length ; claws strong, much curved and pointed.

DIMENSIONS.

	In.	Lines.		In.	Lines.
Length from the point of the bill to			Length of the wings when folded.....	5	2
the tip of the tail.....	8	6	of the tarsus.....	1	3
of the tail.....	3	0	of the middle toe.....	0	8½
of the bill from the angle of the			of the outer toe.....	0	5
mouth.....	1	2	of the inner toe.....	0	3½

The colours of the *female* differ little if at all from those of the male.

Immediately upon reaching Kurichane, this thrush began to appear in the thickets, and we continued to acquire occasionally a specimen even in the vicinity of the Tropic. It seeks its food upon the ground, and when so occupied, its resort is readily discovered by the natives from the noise it makes in scratching the ground, or in displacing rubbish and decayed leaves which conceal the insects it is seeking. The name by which it is known in the country it inhabits is characteristic of the vigour with which it employs its feet, the nearest translation we can give of it is the "Ground-Scraper."

The form of its bill, particularly towards the base, the length of its legs, and the shortness of its tail, are all characters which remove it from the more typical species of the genus *Turdus*, yet there is in its structure and habits what necessarily constitutes it a true thrush.



CHIPPING SPARROW
SPRING

TURDUS LIBONYANA.—SMITH.

AVES.—PLATE XXXVIII.—MALE.

T. suprà valdè flavo-griseus, vertice brunneo-tincto; alarum tectricibus minoribus, remigium tectricibus, pogoniisque externis brunneo-griseis, prioribus aurantio-lavatis; remigibus, internè versus basin pallidè aurantiis; gutture flavo-albo, utrinque fasciâ nigro-brunneo-maculatâ marginato; pectore flavo-griseo pallidè aurantio tincto; abdominis lateribus aurantiis, medio crissoque albis; oculis brunneis; rostro pedibusque flavis.

LONGITUDO, 9 unc.

MERULA LIBONYANA, Smith, Rep. of Exped. App. page 45. June, 1836.

COLOUR.—Above deep yellowish grey, the top of the head strongly shaded with brownish red. Shoulders, lesser wing coverts, quill coverts, and outer vanes of quill feathers brownish grey; the lesser coverts, and the secondary quill coverts faintly tinted with pale buff orange, and the latter distinctly edged with the same colour; inner vanes of quill feathers brownish red, broadly margined internally towards the base with pale buff-orange. The two middle feathers of the tail and the outer vanes of the rest deep broccoli-brown, the inner vanes brownish red, distinctly tipped and faintly margined with white; in certain lights all the feathers appear crossed by a great number of bars of a darker tinge than the ground colour. Throat white tinged with ochre-yellow, and margined on each side by a series of small oval spots of a blackish brown colour, and so arranged as to form two longitudinal bands, one extending from each side of the base of lower mandible. Breast light yellowish gray, faintly tinged with pale Dutch-orange; sides of belly and inner surface of shoulders bright Dutch-orange; middle of belly, vent and under tail coverts white, many of the latter feathers brown towards their base. Eyes dark brown, bill, feet, and claws, yellow, the latter clouded with brown.

FORM, &c.—Typical. Bill nearly straight, the culmen slightly arched towards the base, strongly towards the point; edges of under mandible inflected and received within those of the upper. Wings moderately long,

TURDUS LIBONYANA.

rounded, and when folded cover about the first half of the tail; first quill rudimentary, the third, fourth, and fifth equal and longest, the second and sixth slightly shorter than the fifth. Tail slightly forked, and the two outermost feathers rather shorter than the rest. Tarsi moderately strong, distinctly scutellated anteriorly near to the toes, elsewhere entire; toes robust, the outer slightly longer than the inner one; all armed with curved and pointed claws, the claw of the hinder toe both longest and strongest.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the wings when folded	4	6
the tip of the tail.....	9	0	of the tarsus.....	1	2½
Length of the tail	4	0	of the middle toe.....	0	9
of the bill from the angle of			of the outer toe.....	0	6
the mouth	1	1	of the hinder toe.....	0	4½

The colours of the *female* are not quite so bright as those of the male, particularly those of the belly, the inner surfaces of the shoulders and the internal edges of the wing feathers.

The first specimens of this thrush were procured in the neighbourhood of Kurichane. The thickets which occur upon the banks of rivers form its favourite *habitat*, and it is usually found early in the mornings actively engaged under these thickets in seeking its food, which it often acquires by displacing the rubbish with which the ground in such situations is commonly covered. When disturbed while so occupied it generally takes wing and flies to the spots most densely supplied with foliage, in which it endeavours to conceal itself. In all its habits it closely resembles Le Griverou of Le Vaillant* (*Turdus olivaceus*), and several individuals were passed in the first instance without notice under an idea that they were of the last named species. When one was killed, however, the differences were readily detected: the throat was found to want the spots which exist in *Turdus olivaceus*, and the colours generally to be different, though distributed nearly according to the same pattern.

* Oiseaux d'Afrique, plate 98.



TURDUS GUTTATUS
(Aves Plate 59)

TURDUS GUTTATUS.—VIGORS.

AVES.—PLATE XXXIX.

T. *supernè flavo-brunneus, subtùs albus plus minusve pallidè flavo-brunneo-nebulatus; capitis lateribus strigis tribus nigro-brunneis variatis; pectore abdomineque guttis subrotundis brunneis notatis; tectricibus alarum rectricibusque tribus utrinque lateralibus ad apicem albis; rostro sordidè rufo-brunneo; mandibulâ inferiore ad basin viridi-flavâ; oculis brunneis; pedibus viridi-flavis.*

LONGITUDO corporis cum capite $5\frac{1}{2}$ unc; caudæ, 4 unc.

TURDUS GUTTATUS, Vigors. Proceedings of Zoological Society, 1831, p. 92.

COLOUR.—The upper parts of the head, the back of the neck, the interscapulars, back, shoulders and tail intermediate between honey-yellow and orange-brown (rich yellowish brown); eye-brows and sides of head white tinted with yellowish brown, and the latter is besides variegated with three umber-brown stripes and a number of minute brown spots; two of the stripes originate immediately behind the eye and enclose the ear coverts, the third commences at the base of the lower mandible and terminates about the middle of the neck. Chin, throat, sides of neck, breast, belly, vent, and under tail coverts white; the sides of the breast are tinted with yellowish brown, and each of the feathers of the breast and belly has a roundish umber-brown spot at its tip. Lesser wing coverts and primary and secondary quill coverts umber-brown, with the middle portion of each of the outer vanes of the primary coverts light yellowish brown, the tips of the other feathers pure white. The inner vanes of the quill feathers dull umber-brown, the outer vanes dull wood-brown and edged particularly towards their bases with dirty cream-yellow; the tail is of the same colour as the back, and the three lateral feathers of each side are broadly tipped with white, more especially the outermost, the inner vane of which is white for more than an inch from the tip. Bill dull reddish brown, with the lower mandible towards the base greenish yellow. Legs and claws greenish yellow.

FORM, &c.—Typical. Bill nearly straight, moderately compressed, and the culmen slightly arched. Wings when folded reach some way over the second third of the tail; the first quill feather rudimentary, the fourth and

TURDUS GUTTATUS.

fifth longest and equal, the third and sixth rather shorter, the second about three quarters of an inch shorter than the two longest. Tail long and slightly rounded at the point. Tarsi moderately long, rather robust, and with indications of plates anteriorly towards the toes, elsewhere entire ; claws strong, the anterior ones much curved.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	1	3½
the tip of the tail	9	6	the outer toe	0	7
of the bill from the gape	1	1½	the middle toe.....	0	9½
of the wings when folded	4	10	the inner toe.....	0	6
of the tail	4	0	the hinder toe	0	5

The colours of the *female* are not known.

Only a very few specimens of this species have yet been procured, and none beyond the forests which border upon Port Natal. Those which we have seen were found in damp retired situations ; and when discovered, were actively employed, beneath the brushwood, in search of food.



AQUILA CORONATA.—SMITH.

AVES.—PLATES XL. AND XLI.

A. capite, cervice, partibusque inferioribus flavo-albis; cruribus nigro-brunneis maculatis; dorso griseo-brunneo, plumis albo-marginatis; uropygio, caudæque tectricibus superioribus nigro-brunneis albo-fasciatis; alis subbrevibus; caudâ longâ, nigro brunneâ, dimidio ultimo fasciis tribus cæseis notato et albo terminato; rostro rubro-brunneo; digitis oculisque flavis.

LONGITUDO maris, $34\frac{1}{2}$ unc.

FALCO CORONATUS, Lin.

THE CROWNED EAGLE, Edwards, Plate 224.

IMPERIAL EAGLE OF AFRICA.—Griffith's Animal Kingdom, vol. vi. p. 230.

AQUILA CORONATA, Smith.—South African Quarterly Journal, second series.

(*Adult Male.* Plate XL.)

COLOUR.—Head, crest, neck, and under parts, yellowish white; the thighs externally variegated with large blackish brown bars and arrow-shaped spots, the points of the latter directed towards the bases of the feathers, internally, like the tarsi, they are marked with delicate umber-brown streaks in the course of the shafts; some of the under tail-coverts crossed with irregular umber-brown bars, the shafts of the feathers of the crest brown. Interscapulars and feathers of the back hoary brown, broadly margined with white, the former lightest; rump and tail-coverts blackish brown, irregularly barred and broadly tipped with white. Lesser wing coverts blackish brown, clouded or rather irregularly barred with greyish brown, and all broadly edged at and near the point with white. Primary quill coverts deep blackish brown, tipped with white, their inner vanes towards quills hoary brown; secondary quill coverts blackish brown, with white points, and several broad brownish grey bars. The inner vanes of the primary quill feathers dingy umber-brown, crossed towards their points with irregular blackish brown bars, and towards the bases by white ones; the latter towards the inner edge of the feather spreads so as to form nearly the whole of the marginal colour; outer vanes blackish brown, barred with grey. The inner vanes of the secondary and tertiary quill feathers light brown, fading towards their inner edges into white, and here and there crossed by irregular blackish brown

AQUILA CORONATA.

bars, which diminish in width towards the margins of the feathers; outer vanes transversely banded, blackish brown and deep hoary grey. Tail blackish brown, tipped with white, the last half variegated with three broad, deep, hoary grey bands. The upper mandible and the lower, except at its base, liver-brown, clouded with reddish brown, the base of the lower mandible dingy yellow. Eyes and toes yellow; claws a dark horn colour. Most of the feathers of this bird have a faint silky gloss.

Specimens are frequently obtained in which the under parts are more or less tinged with pale hyacinth-red, and blotched with brown; such appearances are only to be regarded as indications of immaturity.

FORM.—Figure moderately robust; feathers of occiput considerably elongated, and forming a distinct crest. Bill strongly curved towards the point, and the *festoon* on the cutting edge of upper mandible slightly developed. Wings short, somewhat rounded, and, when folded, reach about two inches beyond the base of the tail; the fifth and sixth quill feathers equal and longest; the fourth and seventh equal and a little shorter; the third rather longer, and the second rather shorter than the eighth; the first nearly five inches shorter than the two longest. Legs powerful and feathered to the toes. The toes superiorly with a few transverse plates behind base of claws, elsewhere coated with small subcircular scales; claws long, powerful, much curved and flat beneath.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	4	0
the tip of the tail	34	6	of the outer toe.....	1	6
of the bill from the angle of the			of the middle toe	2	2
mouth	2	4½	of the inner toe	1	3
of the wings when folded	19	0	of the hinder toe	1	1
of the tail	14	0	of the hinder claw ...	2	8

(*Young Female.* Plate XLI.)

COLOUR.—The top of the head, the chin, the throat, and the feathers of the crest umber-brown, the tips of the latter cream yellow; the sides of the head and the upper and lateral parts of the neck dull yellowish brown; the interscapulars, back, rump, upper tail coverts, shoulders, lesser wing coverts, primary and secondary wing coverts and scapulars, rich blackish brown, with a strong resplendent gloss in certain lights. The secondary wing coverts and the upper tail coverts partially barred with dusky white, and the latter also narrowly tipped with the same colour. Breast blackish brown, all the feathers towards the bases cream-yellow with a reddish tint; belly, flanks, vent, and under tail coverts, blackish brown, variegated with bars



AQUILA CORONATA. (young)
(Aves, Plate II)

AQUILA CORONATA.

of pure white or bright reddish orange; and the feathers of the belly and the tail coverts are tipped with one or other of these colours. Thighs externally velvet-black, the feathers tipped and partially barred with white; the tarsi and thighs internally deep umber-brown, tipped and barred with white. Tail coloured as in the adult. Base of lower mandible, edges of upper towards the angle of the mouth, and the toes, yellow; the other parts of the bill and claws horn colour, the latter lightest.

FORM, &c.—Figure rather more massive than that of the male, the feathers of the crest rounded at the points; in other respects the description of the male will apply to the female.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	5	0
the tip of the tail	37	0	of the outer toe.....	1	6
of the bill from the angle of			of the middle toe.....	2	0
the mouth	2	4 $\frac{1}{2}$	of the inner toe	1	2
of the wings when folded.....	20	6	of the hinder toe.....	1	1
of the tail	16	0	of the hinder claw	3	1

There is every reason to believe that this is the bird figured as the “Imperial Eagle of Africa,” in Griffith’s Animal Kingdom, and if so, it is an inhabitant of both Western and Southern Africa, and has a similar range as *Aquila bellicosa*, which is found at Sierra Leone, as well as at the Cape of Good Hope. In South Africa it inhabits the same districts as the last-named species, and is only to be distinguished from it, when flying, by the comparative shortness and roundness of its wings, and the great length of its tail. By these peculiarities it is also readily distinguished from the other or more common species when in the hand; and if further proofs of difference are required, the markings of the tail and the character of the crest will supply ample evidence of its being a distinct species. In *A. coronata*, there are only three light-coloured bars to the tail, and all of these upon the last half of it; while in *A. bellicosa* there are seven light-coloured bars, part of them on the first half. The crest, in the first-mentioned, is strongly developed at all ages; in the last it is only rudimentary, both in youth and in advanced age. It feeds, like its congener, upon small quadrupeds, &c., but is not so active in seizing them, probably owing to the greater imperfection of its wings. It builds its nest on lofty trees, and lays two eggs.



AQUILA BELLICOSA.

AVES.—PLATE XLII.—(MIDDLE-AGED FEMALE.)

A. suprà, purpureo-brunnea, plumis partim purpureo-griseis tinctis; cervice infrà pectoreque brunneis; ventre, cruribusque albis, maculis fasciisque brunneis variegatis; caudâ purpureo-brunneâ fasciis septem purpureo-griseis notatâ, apice albo.

LONGITUDO 36 unc. 6 lin.

LE GRIFFARD, Levaill.—Ois. d' Afrique, vol. i. plate 1.

FALCO BELLICOSUS, Daud.—Orn. vol. ii. p. 38.—Latham, Ind. Orn. Supp. 1801.

FALCO ARMIGER.—Shaw's General Zoology, 1806.

COLOUR.—Head, neck, breast, back, rump, upper tail coverts, and lesser wing coverts dull purplish brown, the interscapulars and the feathers of the back and rump, together with the upper tail coverts, and lesser wing coverts, more or less clouded with dull lavender-purple, and tipped with white; the edges of many of these feathers inclining to yellowish brown, belly, vent, under tail-coverts and legs white, variegated with irregular shaped blotches and short transverse stripes of a purplish brown colour, the latter principally confined to the legs; primary quill coverts and secondary quill feathers purplish brown, the outer vanes of the former and the inner vanes of the latter towards their base clouded with lavender-purple, which colour on the coverts almost forms distinct bars; the points of the last named feathers white; secondary wing coverts yellowish brown clouded with lavender-purple, and tipped with dusky white. Primary quill feathers dusky brown with a strong shade of grey, particularly on the outer vanes; the inner vanes with a number of umber-brown bars. Tail above barred purplish brown and dull lavender-purple, eight bars of the former colour and seven of the latter; beneath white, barred with brown; the tips of all the feathers white. Bill and claws a livid horn colour, with a yellow blotch on each side of base of lower mandible towards the angle of the mouth. Eyes yellow. Toes livid greenish-yellow.

FORM, &c.—Figure moderately robust, somewhat intermediate between that of the more typical eagles and *Morphnus*; feathers of occiput slightly elongated and forming a rudimentary crest. Bill strongly curved towards the

AQUILA BELLICOSA.

point, the hook of upper mandible greatly lengthened, and the *festoon* on the cutting edge strongly developed. Wings long and pointed, and when folded reach to within about two inches of the tip of the tail; the third and fourth quill feathers equal and longest; the second and fifth slightly shorter; the first considerably shorter. Toes with a few transverse plates superiorly behind the base of the claws; elsewhere covered with small, more or less circular scales. Claws very strong, much curved and pointed, particularly those of the middle and hinder toes; these are also grooved internally. Tail, fan-shaped.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the outer toe.....	1	11
the tip of the tail.....	36	6	of the inner toe.....	1	11
of the bill from the gape	2	9	of the middle toe	2	11
of the wings when folded	24	6	of the hinder toe.....	1	7
of the tail	14	0	of the middle claw	2	1
of the tarsus.....	5	0	of the hinder claw	2	9

We have never met a male bird of the age in which the female is represented in the plate, yet we have reason to believe both undergo the same changes; we have seen one in which faint indications of brown markings were still perceptible on the belly.

The plumage of the specimen figured, we are inclined to believe, is that of a bird of the second year, and that had it lived till after another moulting period, the whole of the under parts, behind the breast, with the exception of the legs, would have been a uniform white colour, or, in other words, it would have exhibited the garb which immediately precedes that of maturity, and which has been described and represented by Levaillant.* Small antelopes, hares, and gallinaceous birds, constitute the common food of this eagle, and after capturing them, it carries them away in its powerful talons, either to its nest or to some convenient situation where it can in safety consume them. In seeking its prey, it flies almost constantly in circles, and generally at a very great height; yet the distance to which it ascends does not appear to prove disadvantageous to it, as it readily detects the smallest of the quadrupeds upon which it feeds, even from the great elevation to which it ascends. On discovering its prey it instantly descends, and advances to the object of its pursuit with a rapidity and a noise which excites surprise, though its approach may not have been unobserved.

* Oiseaux d'Afrique, vol. i. plate 1.



FAUPEL'S SWAINSONII Adult

CIRCUS SWAINSONII.—SMITH.

AVES.—PLATES XLIII AND XLIV.

C. pallidè griseus, flavo-griseo umbratus ; subtus albus, gutture pectoreque griseo-tinctis ; caudæ tectricibus superioribus albis, maculis, fasciisque flavo-griseis notatis ; rectricibus duabus intermediis griseis, flavo-griseo tinctis, lateralibus partim griseis partim albis fasciis brunneis sex notatis. Rostro livido-nigro ; cerâ, pedibus, oculisque flavis.

LONGITUDO 19 unc.

CIRCUS SWAINSONII, Smith.—South African Quarterly Journal, vol. i. page 384, 1830.

CIRCUS PALLIDUS, Sykes.—Proceedings of the Zoological Society of London, 1832, page 80.

(*Adult Male.* Plate XLIII. Fig. 1.)

COLOUR.—Above ash-grey, clouded with yellowish-grey. The front, the eye-brows, the upper tail-coverts, the inner surface of the shoulders, and all the under parts snow-white, the throat and breast tinted with pearl-grey, and the tail-coverts blotched and barred with yellow or brownish-grey. Lesser wing-coverts, primary and secondary quill-coverts, scapulars, tertiary quill-feathers, and a few of the innermost secondaries the same colour as the back ; the secondary quill-coverts narrowly tipped with white, and like the tertiaries and innermost secondaries broadly edged internally with the same colour. The basal half of the inner vane of each primary quill-feather white, variegated with incomplete brown bars, the last half dark liver-brown, passing into white at the extreme points ; outer vanes towards the tips brown, more or less deeply tinged with grey, the three or four outermost grey towards the quills. The two centre tail-feathers ash-grey clouded with yellowish-grey, and with faint indications of dark bars on each side of the shafts ; the next two of each side, more or less of the same colour, and with six imperfect dull brown bars, each obscurely edged anteriorly and posteriorly with dirty white ; the three outermost feathers white with six incomplete brownish-grey bars, those of the outer vanes on some of the feathers being connected with each other externally by the same colour, the bars of the exterior feather of each side tinged with buff-orange ; the tips of all the feathers white. Under surface of tail white, with the dark bars obscurely marked. Bill livid black, with a yellow blotch on the edge of both upper and under mandible near base ; cere, legs and toes yellow. Claws a dark horn colour. Eyes yellow.

The feathers of all the upper parts of this bird have a distinct silky lustre.

FORM, &c.—Figure long and slender. Bill delicate and strongly hooked, the cere covered with strong recumbent bristles ; cervical collar distinctly marked, wings when folded reach beyond the commencement of the last third

CIRCUS SWAINSONII.

of the tail; the third and fourth quill-feathers equal and longest. Tail long and slightly round at the point. Tarsi long and rather slender.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.	2	6
the tip of the tail	19	0	of the middle toe.....	1	2
Length of the bill from the gape.....	1	0	of the outer toe.....	0	9½
of the wings when folded....	13	0	of the inner toe	0	8½
of the tail	9	6	of the hinder toe.....	0	6

(Middle Aged Male.—Plate XLIII. Fig 2.)

COLOUR.—Above, a part of the plumage is purplish brown and a part dark silvery grey, the latter most advanced upon the shoulders and anterior parts of the wings. Chin, throat, and breast greyish white, variegated with large rusty brown stripes, one along the middle of each feather; belly, flanks, thighs, vent, and under tail-coverts white, with a number of longitudinal stripes of a colour intermediate between tile and hyacinth-red; upper tail-coverts white, clouded with grey towards the point.

(Young Female.—Plate XLIV.)

COLOUR.—The top of the head, cheeks, ear-coverts, upper surface of the neck, interscapulars, back, scapulars, and lesser wing-coverts purplish brown with a satin lustre, the feathers of the top of the head and the lesser wing-coverts tipped with pale buff-orange, those of the back with reddish orange. The primary and secondary wing-coverts and the quill-feathers umber-brown with a purple shade; the primary wing-coverts are tipped with white, and the first half of the inner vanes of the primary quill-feathers are white barred with dark-brown, the outer vanes strongly tinted with grey; the quill-feathers narrowly tipped with dirty white. The four middle tail-feathers barred alternately with purplish brown and greyish brown, the bars of the latter colours clouded with buff or white shades; the lateral feathers dirty white with three or four rusty brown bars; the tips of all bright sienna yellow. Eye-brows, space under eye, and the rump white; cervical collar, throat, and all the under parts intermediate between sienna-yellow and Dutch-orange; several of the feathers of cervical collar towards its upper extremities brown near centre, and several of those of the breast and belly the same colour near their shaft.

This bird has a wide range in South Africa, and I have myself seen specimens of it, though sparingly, in the neighbourhood of Cape Town, and also near Port Natal, the mouth of the Orange River, and the Tropic of Capricorn. Like its congeners it flies low, often almost touching the surface of the ground, and generally in a straight line, rather than in circles. Its



CIRCUS SWAINSONII,

food consists of small quadrupeds, birds, reptiles, &c. and upon some one or other of these it is often to be seen pouncing in the course of its flight. Damp and marshy situations appear to form its favourite hunting grounds, but it does not, like some of the other Cape species, select those to the exclusion of dry and grassy plains.

Although I am not possessed of the information which would enable me to state positively the age at which *Circus Swainsonii* attains its mature plumage, yet I have reason to believe it appears with the moult of the second year. A female of the first year is represented in Plate XLIV; and fig. 2 of Plate XLIII is a male probably in its second year, just before the adult garb had been fully acquired. The plumage of the young differs not only in colour, but in various other respects from that of the adult. The feathers in the former, besides being more numerous, better formed, and of a more compact texture, are shorter, broader, and more pointed than in the latter.

This is not the only bird of prey, in which we have observed the texture and form of the feathers to vary with age. In many of the *Accipitres* of South Africa, like changes occur; and we find those who have the feathers long, narrow, and pointed in youth, have them short, and with rounded or semicircular points, in mature age—and *vice versa*, though not in the same remarkable degree. Thus diagnostic characters, drawn from the configuration of feathers, will not prove universally applicable; indeed, in several instances in which attempts have been made to render the form of these available in the determination of species, confusion and error have been the result. The long and pointed feathers of *Le Chass-fiente*, Levaillant, have been advanced by some authors as the best and readiest characters, by which it was to be distinguished from *Vultur fulvus*, Lin., of which it is only the young. Having examined hundreds of specimens of the vulture in question, I invariably found all individuals with sallow-coloured plumage—a mark of youth—to have the feathers narrow and pointed, even in the collarlet; while in those with a pale-coloured plumage—one of the indications of maturity—they were broad and semicircular at the points; while the collarlet consisted of coarse, wiry, or decomposed feathers, which, in appearance, almost resembled a ruff of slender bristles. I often met with specimens, also, in the intermediate stages between these extremes; and in many I observed feathers of both descriptions upon the same individuals. In the three vultures which occur in South Africa (*V. fulvus*, Lin., *V. auricularis*, Daud., and *V. occipitalis*, Burchell,) one law seems to prevail; the feathers, in the young of all, are long, narrow, and pointed;—in the adults, they are short, broad, and rounded, or semicircular at the points.

Facts, such as these, testify what caution is required, in order to estimate correctly the value of characters, as they appear in individual specimens, which may be presented for examination. Nothing short of a total revision of the characters, both of groups and species, will tend in the slightest degree to free our science from the anomalies, perplexities, and contradictions by which it is at present swallowed up. Such an inquiry, if cautiously and patiently carried through, would supply either what is required, or prove that such a regularity as would enable the naturalist to detect fixed and general laws, does not exist in nature; or at least is not to be discovered by the cultivators of Natural History of the present day. If the revision be attempted, the degrees of development of individual parts or organs ought especially to be minutely examined, with a view to discover how far such may be available to classification. At present, we find the degree of development of some one external organ, often considered sufficient to constitute a distinct species, though all other characters of the specimen may be strictly in keeping with those of a species, long known to science. My experience,

CIRCUS SWAINSONII.

which has not been very limited, would incline me to regard the size of external parts, particularly in certain classes of animated beings, not entitled to consideration, as a specific character; nor would I even be disposed to admit a greater size of all the parts of the body, as a proof that an individual in which such a condition was manifested, was of a different species from another, from which it only differed in being a trifle larger. To this conclusion I should be led, from having observed among some species,—of *Ploceus* in particular, that some individuals were often to be seen considerably larger than others, where no doubt could exist as to their all being of the same species. During the late expedition into the interior, a well-marked case in point occurred. In a cluster of reeds, skirting a pool of water, some way to the northward of Latakoo, we found an enormous flock of *Ploceus auricapillus*, Sw.; and among the individuals of this flock, a distinct discrepancy, in point of size, was evident; though not the slightest difference could be detected, either in the form or structure of their nests, nor in the shape nor markings of their eggs. Many of the smallest, as well as of the largest individuals, were killed; and no differences could be discovered, on the most minute examination, save that the latter were about a third larger than the former. As I have appeared to lay some weight upon the character of the nests, in proof of these birds being of the same species, I may merely observe that each species of *Ploceus* which inhabits South Africa, forms its nest differently; and the differences are very palpable, when those of each sort are compared together.



STRIX CAPENSIS
(Aves - Plate 45.)

STRIX CAPENSIS.—SMITH.

AVES.—PLATE XLV.—MALE.

S. *suprà* brunneo-rubra, maculis parvis albis parçè notatis; *infra* pallide rufo-ochrea maculis parvis cordatis notatis; fascie brunneo-flavâ; circulo cervicali isabellino, plumis plurimis brunneo-terminatis; remigibus subochreis brunneo-fasciatis; oculis nigro brunneis; rostro, pedibusque livido-flavis.

LONGITUDO 16 unc.

STRIX CAPENSIS, Smith.—South African Quarterly Journal, New Series, 1836.

COLOUR.—The upper surface of the head and neck, the interscapulars, the back, rump, upper tail coverts, lesser wing coverts, scapulars and secondary quill coverts, intermediate between yellowish brown and brownish red, and variegated with a number of white, more or less spear-shaped spots, one towards the point of each feather, those on the head and neck smallest and least distinct. Many of the feathers are also blotched or mottled towards their base with ochre-yellow, which is most distinctly seen when the plumage is deranged. Edges of shoulders and inner surface of wings anteriorly pale Dutch-orange spotted with brown. Primary quill coverts the same colour as the back, each towards the base mottled with reddish orange; the inner vanes of secondary quill coverts dusky white barred with brown. The points of all the primary quill feathers and the outer vanes of the two outermost ones brown, the latter with a few reddish orange variegations towards their base, the remaining primaries, and the secondaries reddish orange externally, cream-yellow internally, both the vanes barred with brown. Sides of the neck and under parts of a colour intermediate between ochre-yellow and pale reddish orange, and each feather, towards its point, is marked with a small heart-shaped pale brown spot; tarsi spotless. Facial disc a pale fawn colour with a pink tint, the bases of the feathers at the inner canthus of the eye brownish black. The cervical collar pale buff-orange with many of the feathers, particularly of its inferior portion, tipped with brown. The two middle tail feathers of the same colour as the back, without variegation; the outer vanes of the three next of each side nearly the same colour, only lighter;

STRIX CAPENSIS.

the inner vanes pale cream-yellow, both crossed with four brown bars ; the outer vanes of the two outermost scinna-yellow, inner vanes white, both with four imperfect brown bars ; the points of all the feathers slightly speckled with white ; bill and toes livid straw-yellow ; eyes brownish black ; claws a dark horn colour. The whole of the plumage has a slight silky gloss.

FORM, &c.—Typical. Bill strongly hooked and pointed. Facial disc rather large, the feathers rigid and wiry, those in front of the eyes directed forwards and covering the base of the bill ; cervical collar strongly marked, the feathers compact, erect, and arranged in several rows, their points slightly rounded ; wings large, and when folded reach about an inch and a half beyond the point of the tail ; the second quill feather the longest, the first and third slightly shorter, the fourth considerably shorter ; tail small and square at the point ; legs long ; upper half of tarsi covered with feathers, lower half and toes covered with small flat circular scales, upon which are scattered a few strong rigid bristles ; the last joint of toes with two or three transverse plates superiorly ; claws long, slightly curved and pointed.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus	3	3
the tip of the tail..... ..	16	0	of the outer toe	1	1½
of the bill from the gape	1	6	of the middle toe.....	1	4½
of the wings when folded ...	12	8	of the inner toe	1	4½
of the tail	5	3	of the hinder toe	0	7½

The *female* is considerably larger than the male, and the colours are not so clear. The down with which the young bird is clothed is a dull cream-yellow, and the plumage of the upper parts during the first year is darker than in adult birds.

The few specimens of this species which I have seen were obtained near Cape Town, close to Table Mountain, in the rocky precipices of which they were said to have concealed themselves during the day. The colonists recognise this bird as distinct from what they call the Doodvogel, (*Strix flammea*, Lin.) which occurs abundantly throughout the whole of South Africa. By its size we at once distinguish it from *Strix badia*, Horsfield, the species to which it is by colours most nearly allied.



MELACONOTUS SIMILIS.—SMITH.

AVES.—PLATE XLVI.—FEMALE.

M. capite suprâ, cervice, regioneque interscapulari cœruleo-griseis; dorso, alarumque tectricibus minoribus flavo-viridibus, ultimarum quibusdam etiamque remigium tectricibus pallidè flavo-terminatis duas lineas obliquas formantibus; caudâ flavo-virescenti, quatuor pennis externis pallidè flavo-terminatis; infrâ lucide flavus, pectore aurantio-tincto. Rostro nigro; pedibus livido-griseis. Oculis brunneo-aurantiis.

LONGITUDO ab apice rostri ad basin caudæ 3 unc. 4½ lin; caudæ, 3 unc. 10½ lin.

MELACONOTUS SIMILIS, Smith.—Rep. of Exped. App. page 44, June, 1836.

MELACONOTUS CHRYSOGASTER, Swains?—Birds of Western Africa, Plate XXV. 1837.

COLOUR.—The upper and lateral parts of the head and neck, together with the interscapulars intermediate between pearl and blueish grey, the upper surface of the head with a slight tint of green; back, rump, upper tail-coverts and lesser quill-coverts, intermediate between siskin and oil-green, a few of the last-named feathers and some of the tail-coverts tipped with straw-yellow. The front and the feathers immediately before the eyes pale yellow; eyebrows white. Primary and secondary quill coverts and the tail-feathers clear oil-green, the three outermost of the latter, on each side, broadly tipped with straw-yellow, and the next to them, narrowly, with the same colour; the primary and secondary quill-coverts straw-yellow at the tips, forming a second oblique band of that colour on each wing. The three outermost quill-feathers brown edged externally with greenish yellow, the remainder of the primaries and the secondaries have the inner vanes brown, and the outer vanes oil-green. Several of the tertiaries are tipped with straw-yellow, the other parts being green with a brown tinge. The inner vane of each quill-feather is edged with straw-yellow, which is of considerable breadth towards their base; inside of shoulder the same yellow. The chin, throat, and under parts light king's-yellow; the breast with a tinge of orange. The tail-feathers are all edged externally with straw-yellow, under-surface of tail light greenish yellow. Bill black; feet livid greenish grey; eyes orpiment-orange.

FORM, &c.—Figure moderately robust. Tail long and rounded at the tip,

MELACONOTUS SIMILIS.

the feathers somewhat pointed. Bill moderately strong anteriorly compressed, culmen obtuse and curved from its base towards the point most distinctly; the upper mandible strongly hooked, the lateral tooth but slightly developed; nostrils close to the base of the bill, near to the commissure, and partially concealed by a few recumbent bristles; point of lower mandible bent upwards. Some short bristles towards angles of mouth. Wings rounded, and when folded reach over the first third of the tail, the fifth quill-feather rather the longest, the fourth and sixth equal and slightly shorter, the third about one line shorter, the second about three lines shorter than the third, and the first nearly seven lines shorter than the third. Tarsi moderately robust, anteriorly scutellated, posteriorly entire; toes strong; claws rather slender, all moderately curved and pointed, those of hinder toes strongest and most arched.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	0	11
the tip of the tail	7	3	of the outer toe.....	0	4
of the bill from the gape ...	0	9	of the inner toe	0	3½
of the tail	3	10½	of the middle toe.....	0	5½
of the wings when folded.....	3	6	of the hinder toe.....	0	3½

The *male* of this species was not procured.

Only one specimen of this species was obtained, and the structure of its feathers indicated that it had not quite reached the age of maturity. The bird described by Swainson,* under the name of *Melaconotus chrysogaster*, is probably a male of this species, which has nearly, if not actually, attained its adult plumage. The existence of two yellow bars upon the wings in our specimen would argue against the identity, but as we know that such colours in this group generally disappear as age advances, we hold their existence as no valid objection to the conclusion, more especially as in *Melaconotus olivaceus* we know that change actually takes place, and even the yellow terminations of the external tail-feathers often disappear about the age of maturity.

Our specimen was killed near Kurichane, lat. 26° South, when searching for its food (insects) among the branches of an acacia tree, and some others which were seen, though not killed, were similarly employed upon similar trees in the same neighbourhood; none were found more to the southward. Those we saw were in localities thinly covered with scattered trees, and they evidently preferred the latter to a denser foliage, inasmuch as a choice was offered. The last remark will also apply to *Melaconotus olivaceus*, which is always found among the branches of lofty trees, even where the surface of the ground around them is densely coated with brushwood, and forming just such a jungle as would please the true *Melaconoti*.

* Jardine's Naturalist's Library, Ornithology, vol. vii. page 244.





LARVAE, TORNIS, ETC.-CHILL.
(Aves Plate 47.)

LAMPROTORNIS BURCHELLII.—SMITH.

AVES.—PLATE XLVII.—MALE.

L. capite suprà, regione interscapulari, dorso, humeris, remigium tectricibus, caudæ tectricibus superioribus, mento, gutture, pectoreque profunde viridi nitentibus; cervice, uropygio abdomineque cyaneo-purpureis; capitis lateribus brunneo-purpureis, plumis quibusdam purpureo-rubro terminatis; rectricium pogoniis externis, cyaneo-purpureis; pogoniis internis brunneo-nigris; rectricibus duabus intermediis æneo-purpureis, reliquis cyaneo-purpureis, omnibus earum remigiumque pogoniis externis, subnigro-fasciatis. Rostro, pedibusque brunneo-nigris; oculis grisco-nigris.

LONGITUDO ab apice rostri ad basin caudæ 6 unc. 9 lin.; caudæ 6 unc. 9 lin.

MEGALOPTERUS AUSTRALIS, Smith.*—Rep. of Exped. App. page 52, June, 1836.

COLOUR, &c.—The upper surface of the head, the interscapulars, the scapulars, the shoulders, the large and smaller quill coverts, the upper tail-coverts, the chin, the throat and the breast dark duck-green with a splendid metallic lustre; the sides of the head pansy-purple, many of the feathers tipped with brilliant shining purplish red passing into flame-red. The back and the sides of the neck superiorly, together with the rump and the belly splendid dark plum-purple, the intensity of the colour varying according to the direction in which the light falls upon the feathers; vent and under tail-coverts the same colour, only neither quite so deep nor so bright; inner vanes of quill feathers brownish black, shaded with green in certain lights; some of the outer vanes coloured like the top of the head, others edged with nut-colour, and elsewhere like the rump plum-purple. The two middle tail-feathers bronzed-purple, deadened by a gloss of green, the outer vanes of the remainder the same colour as the rump, the inner vanes brownish black; all the tail-feathers and the outer vanes of the quill-feathers are faintly variegated with numerous pale, velvet-black bars. On the centre of the abdomen anteriorly there is a large brilliant purplish red blotch, and towards the inner edge of each wing a little behind the point there is an oval spot of the same tint, which in certain positions appears to pass into flame-red, the latter is margined externally with plum-purple. Several of the smaller wing-coverts, and some of the scapulars are broadly banded with velvet-black, and these feathers, as well as most of the smaller ones of this bird, are brownish red, with a silky lustre towards their base. Inner surface of quill-feathers and under surface of tail chocolate-red. Bill and feet brownish black; eyes greyish black.

FORM, &c.—Figure moderately robust; bill rather short, nearly straight, and laterally convex; tip of bill and culmen obtuse; nasal fossæ deep; nostrils

* Having carefully examined a number of species of *Lamprotornis*, I find the peculiarities manifested by the present species, in common with several others, result only from different degrees of development of individual parts, and consequently cannot be employed as generic characters. I have, therefore, found it necessary to discard the group I indicated in 1836, under the title of *Megalopterus*, and also the trivial name of the species I described (*Australis*) as being inapplicable now that the bird must be regarded as a true *Lamprotornis*. The specific appellation which has been substituted will doubtless be approved by persons who desire the merits of a scientific naturalist and able traveller to be duly honoured.

LAMPROTORNIS BURCHELLII.

oval, the upper margins prominent. Wings very large, rounded, and when folded reach nearly to the commencement of the last half of the tail, the third, fourth, and fifth quill-feathers equal and longest, the sixth slightly shorter, the second and seventh equal and about an inch shorter than the longest ones, the first not quite half the length of the second; the points of the inner vanes of the three longest feathers obliquely truncated. Tail long, full, and strongly graduated, the two middle feathers longest and slightly narrower than the lateral ones; the external one of each side about half the length of the two middle ones, the intermediate ones successively graduated between the two extremes. Tarsi strong, anteriorly distinctly scutellated, posteriorly entire; toes strong, particularly the hinder one, the lateral ones nearly of equal length and shorter than the hinder one, the middle one the longest; claws blunt and slightly curved, those of the hinder toes large and robust.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	1	7½
the tip of the tail	13	6	of the outer toe.....	0	7¼
of the bill from the gape	1	1½	of the inner toe	0	7½
of the tail	6	9	of the middle toe	0	11½
of the wings when folded	7	6	of the hinder toe	0	8½

In the *female* the tail is rather shorter, in proportion, than in the male; and the metallic gloss of the plumage, generally, not so brilliant.

We were aware of the existence of this bird for several weeks before we knew to what group it belonged, or even could venture a surmise as to its relations. The great size of its wings, and the peculiar appearance it had in consequence when flying, baffled all our conjectures, and the extreme caution and shyness it observed for a long time ensured it safety, even in the midst of our guns. It was rarely seen to leave high trees, except to remove from one to another, so that, till specimens were actually secured, we never for an instant fancied it to be a *Lamprotornis*. It appeared to seek its food, which consisted of insects and fruits, almost exclusively upon trees; on the other hand, the more common species of South Africa obtain much of theirs on the ground.

If it be essential, in order to carry out the plan of the Creator, that certain birds should be provided with longer and more weighty tails than others of their congeners, it will also be necessary that provision should be made to ensure them against injury or inconvenience from such arrangement. We have indicated a provision in the instance under consideration in the great development of the wing feathers, which can be necessary only to meet the increased obstacles to the bird's progressive motion through the air, created by the length and weight of the tail. In almost every bird in which the last-named organ is of great size, we find the wings also much larger than in species with the same size of body and with short tails. Another species of this genus, from North Africa, *Lamprotornis longicauda*, furnishes evidence of the fact, and several of the *Viduæ* of South Africa might also be instanced, as well as numerous other birds of different countries.

The first specimens we observed were in lat. 25° South, and from thence the numbers gradually increased as we advanced to the northward.



COSSIPHA HUMERALIS.—SMITH.

AVES.—PLATE XLVIII.—MALE.

C. capite suprâ, cervice, regione interscapulari, dorsoque summo nigro-griseis, rufo-brunneo-tinctis; dorso imo flavo-rufo, griseo-tincto; uropygio, caudæ tectricibus superioribus, rectricibusque versus basin rufo-aurantiis, duabus intermediis, apicibusque reliquorum rubro-brunneis; superciliis, tæniolâque frontali albis; capitis et cervicis lateribus, fasciâque pectorali interruptâ nigris; fasciâ humerali albâ; subtus alba posticè rufo-aurantio-tincta.

LONGITUDO ab apice rostri ad basin caudæ 3 unc. 11½ lin.; caudæ 3 unc. 2 lin.

BESSONORNIS HUMERALIS, Smith.*—Rep. of Exped. App. pp. 46, June 1836.

COLOUR.—The upper parts of the head and the neck, together with the interscapulars and the anterior half of the back blackish grey, with a faint tinge of reddish brown; the rest of the back, gall-stone yellow, obscured by a tint of grey. The rump, upper tail coverts, and the greater portion of the tail clear deep orange, the two middle feathers of the latter and the tips of the others deep reddish brown. Eye-brows white, and united anteriorly by means of a narrow band of the same colour, which stretches across the forehead. The sides of the head, including the eyes, the feathers at base of upper mandible in front of the white band, the sides of the neck, and a curved blotch on each side of breast, black. The chin, throat, and breast, pure white; the belly white, with a faint tinge of Dutch-orange; the flanks and under tail coverts pale Dutch-orange; the thighs greyish brown, pencilled with dusky white. Lesser wing coverts black, several of those close to shoulders broadly tipped with white; the primary and secondary quill coverts brownish red, a few of the latter broadly edged externally with white, and form with the white which variegates several of the lesser wing coverts an oblique white band on the anterior part of the wing. Quill feathers brown grey, narrowly margined externally with clear greyish white. Bill liver-brown; feet purplish brown; eyes dark brown.

FORM, &c.—Figure slender; bill nearly straight, triangular at the base,

* This bird is too strongly allied to *Cossypha*, as characterised by Vigors, to warrant my continuing to view it as belonging to an independent group.

COSSIPHA HUMERALIS.

rather convex at the sides in front of nostrils; hook of upper mandible and emargination slightly developed. Bristles at angle of mouth short and scanty. Wings rounded, and when folded extend a little beyond the base of the tail; the fourth and fifth quill feathers equal and longest, the third and sixth equal and slightly shorter, the second and seventh rather shorter than the sixth, the first about half the length of the second, broad and regularly formed. Tail long and slightly rounded at the point; tarsi in front scutellated superiorly and inferiorly, entire in the middle and posteriorly. Outer and inner toes equal and considerably shorter than the middle toe; hinder toe nearly the same length as the lateral toes. Claws pointed, and moderately curved; the claws of the hinder toes longest and strongest.

DIMENSIONS.

Inches. Lines.			Inches. Lines.		
Length from the point of the bill to			Length of the tarsus	1	0
the tip of the tail.....	7	1½	of the outer toe	0	4
of the bill from the gape	0	9	of the middle toe.....	0	6¼
of the tail	3	2	of the hinder toe	0	3½
of the wings when folded ...	3	3			

In size and colour the *female* is like the male.

The first specimen of this species was procured in lat. 26° South, and between that parallel and the tropic of Capricorn we obtained many others. All the individuals seen were upon low trees or high brushwood close to rivers, either at rest on the branches or actively seeking among the foliage for insects, which constitute their food. When in motion they were frequently observed to raise and depress the tail by jerks, after the manner of the *Motacillæ*, and occasionally, though not often, to slightly spread and elevate the wings like the *Saxicolæ*. They shewed nothing of the shyness and vigilance of the latter, the approach of man appeared to give them little uneasiness, and when a specimen was once seen, little precaution was necessary to ensure its acquisition for our collection.

Though this bird differs in some of its habits from the one upon which Mr. Vigors constituted the genus *Cossypha*, yet in others, as well as in its structure, it assimilates so nearly to it as not to justify us in continuing to regard it as of a different group. *Cossypha vocifera*, Vig., frequents similar localities to our bird, and moves about among the branches of trees after the same manner, but as far as we have observed it never jerks its tail or wings. The bird described by Levaillant, under the name of Jan Frederic* (*Cossypha Pectoralis*), resembles strongly in its habits *C. humeralis*; it occurs in similar situations, moves its tail in the same way, and in the mode in which the colours are distributed there is considerable similitude. There is one material difference, however, to be observed between them, *C. pectoralis* is more on the ground than on trees or shrubs; *C. humeralis* again is but rarely seen upon the ground.

* Oiseaux d'Afrique, Plate cxi.



FLY CATCHER OF THE FLY CATCHER
(Aves. Plate 49.)

ERYTHROPYGIA PECTORALIS.—SMITH.

AVES.—PLATE XLIX.—MALE.

E. capite, cervice, interscapularibus dorsoque summo brunneis griseo-tinctis; gutture, abdomineque flavo-albis: pectore pallidè isabellinâ brunneo-strigatis; dorso imo, uropygio, caudæque tectricibus superioribus subferrugineis; alarum tectricibus primariis secundariisque nigro-brunneis albo-marginatis, lineam longitudinalem albam formantibus; remigibus brunneo-rubris externè versus basin pallidè rufo-marginatis. Caudâ nigro-brunnâ, plumarum apicibus albis.

LONGITUDO capitis cum corpore, 3 unc. $1\frac{1}{2}$ lin.; caudæ 3 unc. $1\frac{1}{2}$ lin.

ERYTHROPYGIA PECTORALIS, Smith.—Rep. of Exped. App. p. 46., June 1336.

COLOUR.—The upper surface of the head intermediate between yellowish brown and brocoli brown; the neck superiorly together with the interscapulars, and the anterior half of the back yellowish brown, tinted with brocoli-brown; posterior half of back, rump, and upper tail coverts deep reddish orange. Chin, middle of abdomen, and under tail coverts pale cream-yellow; breast light sienna-yellow, streaked with umber brown—one streak along the centre of each feather; thighs cream-yellow externally spotted with umber brown; flanks dull reddish orange, shaded with light chesnut brown. Eye-brows pale cream-yellow, each margined superiorly with a slender streak of umber-brown; feathers immediately in front of eyes, and a rudimentary line on each side of throat, from base of lower mandible blackish brown; ear coverts pale rufous, clouded with brown. Primary and secondary quill coverts, and the lesser wing coverts, liver brown, some of the last named feathers tipped with white, the others margined with rusty grey. A few of the innermost of the primary quill coverts, and most of the secondaries are edged externally, and partially tipped with white, so that each wing appears crossed obliquely by two irregular white bands. Primary and secondary quill feathers brownish red, with their outer vanes towards the quills narrowly edged with wood brown; tertiary quill feathers liver-brown, broadly margined with yellowish brown. Tail liver-brown, the feathers rusty towards their edges, and white at the points, the quantity of white greatest on the external feather of each side, and least on the two middle ones, upon which it is almost invisible. Bill liver-

ERYTHROPYGIA PECTORALIS.

brown; the base of lower mandible yellowish; legs light yellowish brown, with a flesh coloured tint; eyes clear Dutch-orange.

FORM, &c.—Figure slender; bill slightly curved; the culmen blunt and considerably arched, the degree of curvature in the latter greatest towards the point; the bill triangular towards base, compressed towards the point; the sides of mandibles slightly convex; nostrils small, opening longitudinally and near to the commissure; emargination of upper mandible slightly indicated. Wings rounded, short, and when folded reach a little beyond the base of the tail; the fourth, fifth, sixth, and seventh quill feathers equal and longest, the third slightly shorter, the second considerably shorter than the third, and the first about half the length of the longest ones, and broad and rounded at its point. The secondary and tertiary quill feathers but little shorter than the primaries. Tail long and slightly rounded at the point, the apices of the feathers broad and rounded; tarsi moderately strong, faintly scutellated anteriorly, entire posteriorly. Toes rather slender, the lateral ones equal in length and considerably shorter than the middle one, rather longer than the hinder one, the latter is the most robust. Claws slender, pointed and moderately curved, the hinder claws strongest and longest.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to the			Length of the tarsi	0	11
tip of the tail	6	3	of the outer toe	0	3½
of the bill from the gape	0	8½	of the middle toe	0	6½
of the tail	3	1½	of the hinder toe.....	0	3
of the wings when folded	2	9½			

In the *female* the colours are not quite so bright as in the male. The size of both sexes is the same, and the colours are distributed after the same pattern.

This and the species represented in the next Plate (L.) accord so perfectly in their habits, organization, and configuration, that no doubt can exist as to their being of the same group; but what that group may be is not so easily to be decided. In their manners and habits they have a remarkable similitude to the *Saxicolæ*, and their colours are distributed after a like fashion. The form and character of their individual organs, however, exclude them from that group. The bill, wings and tail are not those of *Saxicolæ*, and the circumstance of their never leaving trees and descending to the ground, also removes them from a genus the species of which, in many respects, they strongly resemble. They jerk their wings after the same manner as the *Saxicolæ*, and they hunt for insects which constitute their food with the same activity.



ERYTHROPYGIA PAENA. (A male: B young.)
(Aves. Plate 50)

ERYTHROPYGIA PAENA.—SMITH.

AVES.—PLATE L.—MALE AND YOUNG.

E. capite suprâ obscure brunneo, plumis rufo-griseo marginatis; cervice rufo-griseo; interscapularibus dorsoque summo flavo-rufis; dorso imo, uropygio, caudæ tectricibus superioribus, caudâque versus basin rubro-aurantiis; gutture albo; pectore ventreque pallidè lactifloribus, pectoris abdominisque lateribus flavo-brunneo-tinctis; remigibus brunneo-rubris, externe pallidè flavo-brunneo-marginatis; rectricibus versus apices nigro-brunneis, quatuor externis singulorum albo-terminatis; superciliis lactifloribus. Rostro, nigro-brunneo; pedibus lividè griseo-brunneis.

LONGITUDO ab apice rostri ad basin caudæ 3 unc. 3 lin.; caudæ, 2 unc. 9 lin.

ERYTHROPYGIA PAENA, Smith.—Rep. of Exped., App. p. 46., June, 1836.

COLOUR.—(*Male*, fig. *a*.) Head superiorly dull brown, the feathers distinctly edged and tipped with rusty grey; upper aspect of neck rusty grey; interscapulars and anterior half of back intermediate between Dutch-orange and yellowish brown; hinder part of back, rump, upper tail coverts and the basal two-thirds of tail clear reddish orange, last third of tail feathers liver brown, the edges of the feathers rusty, and the four outer ones of each side broadly tipped with white; chin and throat white; breast, belly, and vent pale cream-yellow; the sides of the breast and the flanks with a strong tint of rusty yellowish brown. Lesser wing coverts pale greyish brown; primary and secondary quill coverts brownish red, the latter externally edged with pale wood-brown. Quill feathers brownish red, delicately edged externally with wood-brown, which on a few of the primaries, towards their bases, becomes strongly tinted with buff-orange; several of the secondaries are narrowly tipped with white, the inner vanes of most of the quill feathers broadly edged with yellowish white; the inner surface of the shoulders pale cream-yellow. Bill liver-brown; eyes reddish brown; legs livid greyish brown.

FORM, &c.—Figure slight; bill rather slender, and slightly curved, the culmen arched, from the base, the curvature rather abrupt towards the point; emargination near tip of upper mandible, scarcely visible; nasal fossæ deep. Wings short, rounded, and when folded reach over nearly the first third of the tail, the third, fourth, and fifth quill feathers of the same length and the

ERYTHROPYGIA PAENA.

longest, the second and eighth equal in length, and about four lines shorter, the first about half the length of the longest ones, narrow, particularly towards the point. Tail moderately rounded; tarsi slender, faintly scutellated anteriorly, entire posteriorly; toes of moderate strength, the middle one considerably longer than the other three; claws slightly curved and pointed, those of the hinder toes longest and strongest.

DIMENSIONS.

	Inches.	Lines.		Inches.	Lines.
Length from the point of the bill to			Length of the tarsus.....	1	0
the tip of the tail.....	6	0	of the outer toe.....	0	4
of the bill from the gape	0	9	of the inner toe.....	0	6
of the wings when folded	2	9	of the middle toe	0	4½
of the tail	2	9	of the hinder toe	0	3

The colours of the *female* are the same as those of the male, only not quite so clear. The young bird (fig. *b.**) is highly variegated: the feathers of the head, neck, back, and rump are dull cream-yellow, tipped with dark brown; those of the under parts, pale cream-yellow, tipped with reddish brown.

The habits and configuration of this species, as has already been observed, agrees with those of *E. pectoralis*; like it, the present inhabits arid districts thinly covered with dwarf trees, among the branches of which it seeks its food. Its movements, while flitting from branch to branch, are rapid, and when resting or hunting for insects it is constantly watchful, always ready to take alarm and to retreat when its haunt has once been discovered. On such occasions, however, it rarely flies far before it alights, and if not under the influence of fear, it seldom passes the tree nearest to that it has abandoned. In its disposition to view every object with distrust, and to watch carefully whatever attracts its attention, it resembles in a marked manner the *Saxicola*.

* The specimen figured had acquired much of the plumage of an adult bird, hence the colours of youth are but imperfectly represented.

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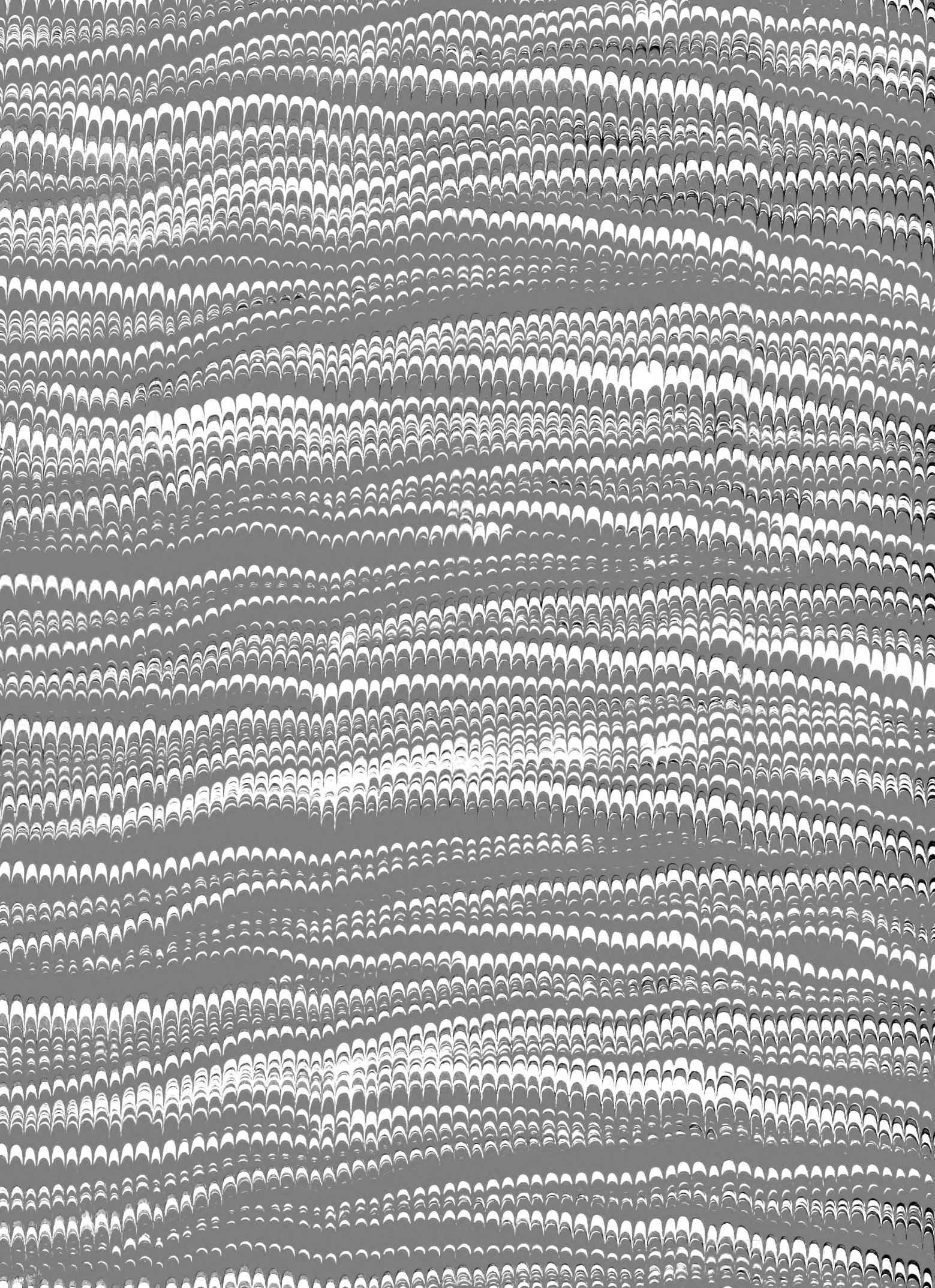
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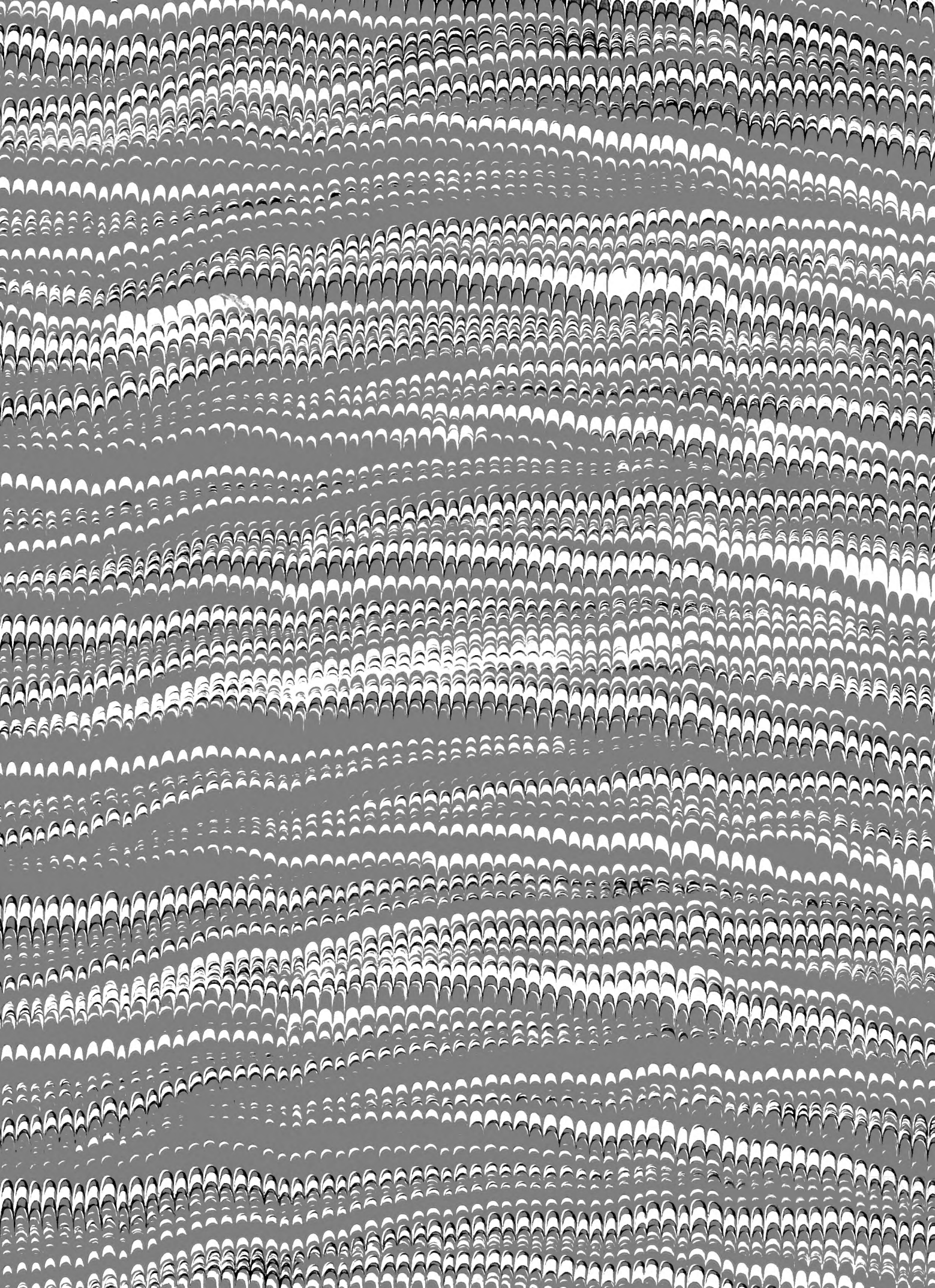
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